

SPEC # _____

CONTRACT AND SPECIFICATIONS

FOR

CONTRACT NO. CK-111

**STREETSCAPE SCREEN
AT THE
WASTEWATER TREATMENT FACILITY**

For The

**CITY OF KINGSTON
ULSTER COUNTY, NEW YORK**

APRIL 2013

THIS DOCUMENT WAS PREPARED FOR THE NEW YORK STATE
DEPARTMENT OF STATE WITH FUNDS PROVIDED UNDER TITLE 11 OF
THE ENVIRONMENTAL PROTECTION FUND.

**GUARDIA ARCHITECTS
233 Delavan Avenue
Newark, New Jersey 07104**

ADDENDUM NO. 1
CONTRACT NO. CK-111
STREETSCAPE SCREEN
AT THE
WASTEWATER TREATMENT FACILITY
CITY OF KINGSTON
ULSTER COUNTY, NEW YORK
September 5, 2013

Sergio Guardia, RA

SPECIFICATIONS:

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Section 02513 - Asphalt Paving - Page 02513-1

Page 31200

SECTION 31200 - EARTH MOVING - **Add** the attached section to the specifications.

Page 31621

SECTION 31621 - STEEL PILES - **Add** the attached section to the specifications.

END OF ADDENDUM NO. 1

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END OF REVISED TABLE OF CONTENTS

SECTION 31200 - EARTH MOVING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 FOUNDATION AND EXCAVATION

- A. The foundation design is based on the recommendations contained in the geotechnical engineering report by Maser Consulting, PA dated December 12, 2008.
- B. The bottom of all excavations shall be inspected by the owner's geotechnical engineer prior to placing concrete or granular fill to verify the presumptive bearing strata and design soil bearing pressure. All unsuitable material (brick fragments, asphalt, concrete boulders, etc.) Within the building area and excavation shall be removed from the site.
- C. All water and unsuitable material shall be removed from the bottom of the excavation before compacting subgrade and placing concrete or granular fill. Ground water shall be kept a minimum of 2' below new foundations / footings until concrete has cured.
- D. Foundation walls and footings shall bear on compacted gravel cushion pad placed on undisturbed or properly compacted native soil u.o.n.
- E. The cast-in-place slab-on-grade shall be placed on a 6 mil polyethylene vapor barrier over 6" minimum of compacted granular fill u.o.n. on the drawings.
- F. Compacted granular fill shall consist of broken or crushed stone, or bank or crushed gravel and shall consist of sound, tough durable particles free from soft, thin, elongated or laminated pieces and free of mud, dirt, vegetative or other deleterious substances graded as follows:

SQUARE MESH SIZE:	PERCENT PASSING BY WEIGHT
PASS 3"	100
PASS #40	10-70
PASS #200	0-11

- G. The compaction effort, where required, shall be inspected by the owner's geotechnical engineer. Material requiring compaction shall be placed in maximum 8" lifts before compaction. Each lift shall be compacted with appropriate equipment to a minimum of 95 % of its maximum density at or near optimum moisture. The owner's geotechnical engineer shall test the material before and after compaction for conformance with the specifications. No lifts shall be placed when weather conditions are such that the moisture content of the material cannot be properly controlled. In placing or compacting

material, do not damage nor displace concrete work already in place by contact with compaction machinery.

- H. All soil surrounding and under new and existing foundations shall remain "undisturbed" throughout the course of construction.
- I. The contractor shall be responsible for limiting pours to minimize shrinkage cracking. Wall contraction and/or construction joints shall be spaced at a maximum distance of 40'-0". Slab contraction and/or construction joints shall be spaced at a maximum distance of 15'-0". The location and configuration of joints exposed to view shall be coordinated with the architect.
- J. Contractor shall verify dimensions and locations of all slots, pipe sleeves, openings, anchor bolts, etc. As required for the building structure and for the work of other trades before setting forms. Coordinate all requirements with the architectural and m/e/p drawings.
- K. Vertical construction joints in walls shall be used only when unavoidable and shall be located a minimum 6'-0" from any supporting pier or buttress, except where specifically shown on the drawings. No horizontal construction joints other than those shown on the drawings will be allowed.
- L. The contractor shall employ all necessary measures to safeguard the structural integrity of adjacent structures during excavation and construction of new foundations.
- M. All existing conditions depicted on the drawings are based on information provided by others. Any unusual conditions or discrepancies shall be brought to the immediate attention of the engineer.
- N. At no time shall bulldozers, trucks or other heavy construction equipment be permitted closer than 8'-0" to any foundation wall.
- O. All excavations shall conform to the building code of the state of New York and to all OSHA requirements regarding the bracing, sheeting, shoring, etc.
- P. All existing foundations were designed and constructed by others.

END OF SECTION 31200

SECTION 31621 – STEEL PILES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 HELICAL SCREW PILE

- A. Helical piers shall be manufactured by the A.B. Chance Co., Centralia, MO.
- B. Piers shall be installed by an authorized A.B. Chance installing contractor who has satisfied the certification requirements relating to the technical aspects of the product and the ascribed installation techniques. Proof of current certification by the A.B. Chance Co., Must be provided.
- C. All work as described herein shall be performed in accordance with all applicable safety codes in effect at the time of installation.
- D. Helical piers as specified shall conform to either the SBCI-Standard Building Code, BOCA National Code, or ICBO-Uniform Building Code. An official evaluation report with assigned number shall be presented upon request to the owner and / or their representative SBCCI-9504b; BOCA-RR94-27; ICBO-ER-5110.
- E. The helical lead sections and extension sections shall be solid steel, round cornered square shaft, or round steel pipe shaft, or composite steel and grout shaft configured with one or more helical bearing plates welded to the shaft.
- F. All piers must be corrosion protected by hot dip galvanization.
- G. Installation units shall consist of a rotary type torque motor with forward and reverse capabilities. These units are typically powered.
- H. Installation units shall be capable of developing the minimum torque as req'd.
- I. Installation units shall be capable of positioning the helical pier at the proper installation angle. This angle may vary between vertical and 5 degrees depending upon application and type of load transfer device specified or required.
- J. Installation torque shall be monitored throughout the installation process.
- K. Helical piers shall be installed to the minimum torque value required to provide the load capacities shown on the plans.

- L. The appropriate steel new construction load transfer device shall be used.
- M. Appropriate helical pier selection will consider design load plus safety factor soil parameters and the installation torque vs. capacity equation as per the manufacturers recommendations.
- N. Based on the soil profile, every attempt shall be made to achieve the required torque in the upper 10' of soil.

END OF SECTION 31621

NOTICE TO BIDDERS, PROPOSAL
CONTRACT AND SPECIFICATIONS
FOR
CONTRACT NO. CK-111
STREETSCAPE SCREEN
AT THE
WASTEWATER TREATMENT FACILITY
CITY OF KINGSTON
ULSTER COUNTY, NEW YORK

SHAYNE GALLO, MAYOR
COMMON COUNCIL
JAMES L. NOBLE, JR., ALDERMEN-AT-LARGE

ALDERMEN

Matthew Dunn, First Ward
Thomas Hoffay, Second Ward
Nathaniel Horowitz, Third Ward
Shirley Whitlock, Fourth Ward
William Carey, Fifth Ward
Elisa Ball, Sixth Ward
Maryann Mills, Seventh Ward
Robert Senior, Eighth Ward
Deborah Brown, Ninth Ward
Carly Williams, City Clerk

Sergio Guardia, RA

**THIS DOCUMENT WAS PREPARED FOR THE NEW YORK STATE DEPARTMENT OF
STATE WITH FUNDS PROVIDED UNDER TITLE 11 OF THE ENVIRONMENTAL
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APRIL 2013

GUARDIA ARCHITECTS
233 Delavan Avenue
Newark, New Jersey 07104

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INVITATION FOR BIDS

Sealed bids for Contract No. CK-111, Streetscape Screen at the Wastewater Treatment Facility, for the City of Kingston, Ulster County, New York, are sought and requested as set forth in drawings and specifications prepared by Guardia Architects, 233 Delavan Avenue, Newark, New Jersey 07104.

The contract consists of one proposal: construction of streetscape structural, landscaping and lighting improvements and associated site work at the Wastewater Treatment Facility, East Strand for the City of Kingston, Ulster County, New York.

Separate sealed proposals completed on forms provided with the Contract Documents shall be received by the City of Kingston, Ulster County, New York at City Hall until 4:00 PM o'clock on Thursday, September 19, 2013, at which time they will be publicly opened and read aloud.

All of the contract documents, including Instructions to Bidders, Proposal Forms, General Conditions governing the contract, drawings and detailed specifications, may be examined at the office of at the office of Economic and Community Development, City Hall, 420 Broadway, Kingston, New York. Copies of these documents may be obtained at these offices upon payment of \$60.00 per set. All payments shall be made payable to City of Kingston. Payment for documents represents reproduction costs and, therefore, is non-refundable. Contract documents will be sent via first class mail upon request and receipt of an additional payment of \$10.00 made out to City of Kingston which includes postage and handling costs.

Pre-Bid Meeting (Mandatory)

A Pre-Bid Meeting will be held at the Wastewater Treatment Facility on East Strand in the City of Kingston on Friday, September 6, 2013, at 11:00 o'clock AM to discuss the contract requirements with the Owner and Engineer and answer any Contractor's questions at this time.

Each bidder must deposit with his bid, security in the amount of not less than five percentum (5%) of the bid in the form of a certified check or bid bond subject to the conditions of this Contract.

The successful bidder shall furnish a Performance Bond and a Labor and Material Payment Bond in the amount of 100% of the accepted bid as set forth in the Bid Form. These Bonds shall be in compliance with the Specifications.

The City of Kingston hereby notifies all Bidders that it will affirmatively insure that in regard to any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the ground of race, color, or national origin in consideration for an award.

The bidder, by signing his proposal, certifies that he is fully aware of the State Laws regarding the non-collusion bidding certification. No separate forms will be required, but the actual signing of the proposal includes such a statement and is included in the proposal.

The City of Kingston expressly reserves the right to waive any informalities in or to accept any bid, or to reject any and all bids, or to award on any or all items, as the interest of the City of Kingston may appear to require.

The City of Kingston is an exempt organization under the Tax Laws and is exempt from payment of Sales and Compensating Use Taxes of the State of New York and Cities and Counties of the State of all materials which are to be incorporated into the project, pursuant to the provisions of the Contract. These taxes are not to be included in the Bid.

No bidder may withdraw his bid within 45 (forty-five) days after the actual date of the opening thereof.

By order of the City of Kingston, Ulster County, New York.

Date: August 23, 2013

By: Shayne Gallo, Mayor

INSTRUCTIONS FOR BIDDERS

Receipt and Opening of Bids

The City of Kingston, Ulster County, New York hereinafter called the Owner, invites bids on the form attached hereto, all blanks in which must be appropriately filled in. Bids will be received by the Owner until 4:00 PM o'clock on Thursday, September 19, 2013, at City Hall, 420 Broadway, City of Kingston, New York, and then at said office, opened and publicly read aloud.

The envelopes, containing the bids must be sealed and addressed to the Director of Economic and Community Development, City of Kingston, Kingston, New York 12401 and designated as Bid for Contract No. CK-111. The Owner may consider as informal any bid not prepared and submitted in accordance with the provisions hereof. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof.

Preparation of Proposal

Proposals must be submitted on the prescribed form. All blank spaces for bid prices must be filled in, in ink, in both words and figures with the unit price for which the proposal is made.

All bids must be submitted in sealed envelopes, bearing on the outside, the name of the bidder, his address, and the name of the project for which the bid is submitted. (If forwarded by mail, the sealed envelopes containing the proposal, and marked as directed above, must be enclosed in another envelope, addressed as specified in the Proposal Form; preferably by Registered Mail).

The work shall be bid as one (1) contract for General Construction. The Contract includes a base bid and an alternate bid, each bidder must bid on all items of the work in both the base bid and the alternate bid forms.

Non-Collusion and Bid Certification

The bidder, by signing his proposal, certifies that he is fully aware of the State Laws regarding the non-collusion bidding certification. No separate forms will be required, but the actual signing of the proposal includes such a statement and is included in the proposal.

Qualifications of Bidder

The Owner may make such investigation as he deems necessary to determine the ability of the bidder to perform the work and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request.

The Owner reserves the right to reject any bid if the evidence submitted by, or investigations of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligation of

the contract and to complete the work contemplated therein. Conditional bids will not be accepted.

Bid Security

Each bid must be accompanied by cash, by a certified check of the bidder payable to the order of the City of Kingston or by a bid bond, duly exercised by the bidder as Principal, and having as surety thereon a surety company licensed to do business in the State of New York, approved by the Owner in the amount of five percent (5%) of the total Proposal submitted. Bid security shall be returned to all except the three lowest bidders within three (3) days after the formal opening of bids. The remaining Bid Security will be returned to the three lowest Bidders within forty-eight (48) hours after the Owner and the accepted Bidder have executed a Contract and the executed Performance Bond and Payment Bonds have been approved by the Owner. If the required contract and bonds have not been executed within forty-five (45) days after the date of opening of Bids, then the Bid Security of any Bidder will be returned upon his request, provided he has not been notified of the acceptance of his Bid prior to the date of such request.

Liquidated Damages

The Owner shall be entitled to receive as liquidated damages the face amount of the certified check or bid bond deposited with the bid if the successful bidder fails to or refuses to execute and deliver the contract and bond required within five (5) days after he has received notice of the acceptance of his bid.

Conditions of Work

Each bidder must inform himself fully of the conditions relating to the construction and labor under which the work is now or will be performed; failure to do so will not relieve a successful bidder of his obligation to furnish all materials and labor necessary to carry out the provisions of the contract documents and to complete the contemplated work for the consideration set forth in his bid.

Addenda and Interpretations

No interpretation of the meaning of the plans, specifications, or other contract documents will be made to any bidder orally. Every request for such interpretation should be in writing and addressed to Guardia Architects, 233 Delavan Avenue, Newark, New Jersey 07104 and to be given consideration must be received at least seven days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be mailed or delivered to all prospective bidders (at the respective addresses furnished for such purposes). Failure of any bidder to receive any such addendum or interpretation shall not relieve the bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.

Construction Terms and Conditions

The bidder is warned that the construction terms and conditions hereinafter fully set forth in the form of Contract will be rigidly enforced.

Security for Faithful Performance

Simultaneously with his delivery of the executed contract, the successful bidder must deliver to the Owner, executed bonds in the amount of one hundred per centum (100%) of the total amount bid as security for the faithful performance of his contract. He shall also provide a separate bond for payment not less than one hundred per centum (100%) of the contract price. These bonds shall be prepared on forms supplied by the Surety Company or companies, licensed to do business in the State of New York, and currently issued by the American Institute of Architects.

Lowest Qualified Bidder

The comparison of bids on this Contract will be made by comparing the total sums as submitted by each separate contractor for the Base Bid. The lowest qualified bidder shall be considered as being the successful bidder for the contract. The contract award will be made to the successful bidder as described above if the project in total is acceptable to the Owner.

Time of Completion and Liquidated Damages

All work shall be completed in 90 consecutive calendar days from the date set forth in the Notice to Proceed.

The date of completion shall be the date when the work has been substantially completed to such an extent that the Owner can utilize the site without inconvenience.

Minor items which are not completed but which do not interfere with the daily use of the wastewater treatment facility by the owner will not be deemed as a failure to comply with the requirements of the time of completion of the work.

Liquidated damages may be assessed for each and every calendar day that the work is not in substantial completion, after the above stated time for total completion of the work at the rate of Five Hundred Dollars and 00/100 (\$500.00) per day.

Obligation of Bidder

At the time of the opening of bids, each bidder will be presumed to have inspected the various construction sites and to have read and to be thoroughly familiar with the Plans and Contract Documents (including all addenda). The failure or omission of any bidder to receive or examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect to his bid.

Equal Employment Opportunity

Attention of Bidders is particularly called to the requirements for ensuring that employees and applicants for employment are not discriminated against because of their race, creed, color or national origin.

Tax Exemption

The City of Kingston is an exempt organization under the Tax Law and is exempt from payment of Sales and Compensating Use Taxes of the State of New York and cities and counties of the State on all materials which are to be incorporated into the project, pursuant to the provisions of the contract. Tax exempt certificates will be provided by the Owner for use by the successful bidders. These taxes are not to be included in the bid.

Local and State Laws

The Contractor shall abide by all local and State laws or ordinances to the extent that such requirements do not conflict with Federal laws or regulations.

Labor, Safety and Health Regulations

The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction.

Safety Standards and Accident Prevention

With respect to all work performed under this contract, the Contractor shall:

- a. Comply with the latest safety standards provisions of applicable laws, building and construction codes and the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America.
- b. Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property.
- c. Maintain at his/her office or other well known place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital or a doctor's care of persons (including employees), who may be injured on the job site. In no case shall employees be permitted to work at a job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor's care.

Experience Clauses

These specifications contain requirement that material or equipment suppliers have specific experience. The Owner or Engineer may also require proof of proper facilities to manufacture material and/or equipment specified.

Performance and Payment Bond Requirements

The bidder to whom the municipality proposes to award the contract shall, as soon as possible, but not later than ten (10) days from the date of the Notice of Award furnish to the municipality a bond equal to one hundred percent of the amount of the contract, conditioned for the faithful performance of all terms, covenants and conditions of same, with a surety company authorized to do business in the State of New York, as surety. If the bidder fails to furnish said Bonds within ten (10) days of the Notice of Award, said Owner will be entitled to consider all rights arising out of the Owner's acceptance of Bid as abandoned and as a forfeiture of Bid Bond. The Owner will be entitled to such other rights as may be granted by law.

The performance bond shall be maintained in full force for a period of twelve months after date of final certificate as a guarantee that the Contractor will make good any faults or defects in the work arising from improper or defective workmanship or materials which may appear during that period.

A separate payment bond will be supplied in the amount of 100% of the contract price and shall be kept in force for a period of 12 months after the date of final certificate.

Certificate of Insurance

A certificate of insurance will be required at the time of contract signing, naming the Owner (City of Kingston), and the Architect (Guardia Architects), Connolly Engineering, PLLC, Taconic Site Design and Landscape Architecture, Brinnier and Larios, P.C., Michael Stiller and Arun Rimal as additional insureds. (Refer to General Conditions, Paragraph 21, Insurance, page GC-14 through GC-16 and Supplemental General Conditions, Paragraph 3, Insurance, Page SGC-1 and SGC-2).

Pre-Bid Meeting (Mandatory)

A Pre-Bid Meeting will be held at the Wastewater Treatment Facility on East Strand in the City of Kingston on Friday, September 6, 2013, at 11:00 o'clock AM to discuss the contract requirements with the Owner and Engineer and answer any Contractor's questions at this time.

Funding

This project is funded thanks to grant #C007029 from the New York State Department of State with funds provided under Title 11 of the environmental Protection Fund Act.

Apprenticeship

Suggested standards for apprenticeship agreements. Suggested standards for apprenticeship agreements are as follows:

1. A statement of the trade or craft to be taught and the required hours for completion of apprenticeship which shall be not less than four thousand hours of reasonably continuous employment.
2. A statement of the processes in the trade or craft divisions in which the apprentice is to be taught and the approximate amount of time to be spent at each process.
3. A statement of the number of hours to be spent by the apprentice in work and the number of hours to be spent in related and supplemental instruction which instruction shall be not less than one hundred forty-four hours per year when available, such availability to be determined by the commissioner of education.
4. A statement that apprentices shall be not less than sixteen years of age.
5. Provision that apprentices shall be selected on the basis of qualifications alone, as determined by objective criteria which permit review, and without any direct or indirect limitation, specification or discrimination as to race, creed, color, age, sex or national origin.
6. A statement of the progressively increasing scale of wages to be paid the apprentice.
7. Provision for a period of probation during which the industrial commissioner shall be directed to terminate an apprenticeship agreement at the request in writing of any party thereto. After the probationary period the industrial commissioner shall be empowered to terminate the registration of an apprentice upon agreement of the parties.
8. Provision that the services of the industrial commissioner may be utilized for consultation regarding the settlement of differences arising out of the apprenticeship agreement where such differences cannot be adjusted locally or in accordance with the established trade procedure.
9. Provision that if an employer is unable to fulfill his obligation under the apprenticeship agreement he may transfer such obligation to another employer.
10. Such additional standards as may be prescribed in accordance with the provisions of this article.

Apprenticeship participation on construction contracts. For purposes of this section:

“Governmental Entity” shall mean the state, any state agency, as that term is defined in section two-a of the state finance law, municipal corporation, commission appointed pursuant to law, school district, district corporation, board of education, board of cooperative educational services, soil conservation district, and public benefit corporation; and

“Construction Contract” shall mean any contract to which a governmental entity may be a direct or indirect party which involves the design, construction, reconstruction, improvement, rehabilitation, maintenance, repair, furnishing, equipping of or otherwise providing for any building, facility or physical structure of any kind.

Notwithstanding any other provision of this article, of section one hundred three of the general municipal law, of section one hundred thirty-five of the state finance law, of section one hundred fifty-one of the public housing law, or of any other general, special or local law or administrative code, in entering into any construction contract, a governmental entity which is to be a direct or indirect party to such contract may require that any contractors and subcontractors have, prior to entering into such contract, apprenticeship agreements appropriate for the type and scope of work to be performed, that have been registered with, and approved by, the commissioner pursuant to the requirements found in this article. Whenever utilizing this requirement, the governmental entity may, in addition to whatever considerations are required by law, consider the degree to which career opportunities in apprenticeship training programs approved by the commissioner may be provided.

BID PROPOSAL FORM

CONTRACT NO. CK-111

General CONSTRUCTION

CONTRACTOR'S NAME AND ADDRESS:

TELEPHONE NO.: _____

FAX NO.: _____

FEDERAL I.D./S.S. #: _____

BID FORM
CONTRACT CK-111 - GENERAL CONSTRUCTION

TO: City of Kingston

City Hall, 420 Broadway

Kingston, New York 12401

Gentlemen:

I hereby submit my Bid for Streetscape Screen at the Wastewater Treatment Facility for the City of Kingston, Ulster County, New York.

1. LUMP SUM BASIS:

Having carefully examined:

- a. The Advertisement for Bids, Instructions to Bidders, Bid Form, General Conditions, Supplementary General Conditions and Prevailing Wage Rates.
- b. The Specifications titled and dated: Contract No. CK-111, Streetscape Screen at the Wastewater Treatment Facility, City of Kingston, Ulster County, New York, April 2013.

- # PROPOSAL

TOTAL BASE BID AMOUNT \$_____

BASE BID	\$ _____
ALLOWANCE	\$ 10,000.00
TOTAL AMOUNT BID	\$ _____

BID ADDITION #1:

ITEM NO.	APPROX. QUANTITY	DESCRIPTION OF WORK	<u>UNIT PRICE</u> Dollars/Cents	<u>AMOUNT</u> Dollars/Cents
Bid Addition #1	Lump Sum	Complete for the Lump Sum Price of _____ _____		

TOTAL AMOUNT BID ADDITION #1 \$ _____

WRITTEN IN WORDS:

BID ADDITION #2:

ITEM NO.	APPROX. QUANTITY	DESCRIPTION OF WORK	<u>UNIT PRICE</u> Dollars/Cents	<u>AMOUNT</u> Dollars/Cents
Bid Addition #2	Lump Sum	Complete for the Lump Sum Price of _____ _____		

TOTAL AMOUNT BID ADDITION #2 \$ _____

WRITTEN IN WORDS:

BID ALTERNATE #1:

ITEM NO.	APPROX. QUANTITY	DESCRIPTION OF WORK	<u>UNIT PRICE</u> Dollars/Cents	<u>AMOUNT</u> Dollars/Cents
Bid Alternate #1	Lump Sum	Complete for the Lump Sum Price of _____ _____		

TOTAL AMOUNT BID ALTERNATE #1 \$ _____

WRITTEN IN WORDS:

- e. Refer to Summary of Work Section 01011 - Page 01011-2 and project plans for description of Bid Addition and Bid Alternate Items.

- f. The undersigned agrees to start work at the site at the date to be specified on a written notice from the Owner to do so but, in no case, later than ten (10) days after the signing of the Notice to Proceed and that the work will be completed within 90 calendar days.

2. BONDS:

The undersigned agrees, if award the Contract, to deliver to the Owner simultaneously with the executed Contract an executed Performance Bond and a Labor and Material Payment Bond both of a corporate surety licensed to do business in the State of New York, in the amount of one hundred percent of the accepted contract sum. This shall guarantee the prompt payment of all indebtedness, incurred by the Contractor, or any subcontractor for supplies, materials or labor furnished, used or consumed directly in furtherance of such construction. The form of both the Performance Bond and the Labor and Material Payment Bond shall be that currently issued by the American Institute of Architects.

Surety Company shall be as approved by the Owner, the Contractor shall pay the premium for such Bonds.

3. INSURANCE:

Two copies of a Certificate of Insurance shall be provided at the contract signing, naming the Owner (City of Kingston) and Architect (Guardia Architects), Connolly Engineering, PLLC, Taconic Site Design and Landscape Architecture, Brinnier and Larios, P.C., Michael Stiller and Arun Rimal as additional insureds.

4. NON-COLLUSIVE BIDDING CERTIFICATE:

By submission of this Bid, the Bidder certifies that: (a) this Bid has been independently arrived at without collusion with any other Bidder or with any Competitor or Potential Competitor; (b) this Bid has not been knowingly disclosed prior to submission or opening of Bids for this project, to any other Bidder, Competitor or Potential Competitor; (c) no attempt has been or will be made to induce any other person, partnership or corporation to submit or not to submit a Bid; (d) the person signing this Bid certifies that he has fully informed himself regarding the accuracy of the statements contained in this certification, and under the penalties of perjury, affirms the truth thereof, such penalties being applicable to the Bidder as well as to the person signing in it's behalf; (3) that attached hereto (if a corporate Bidder) is a certified copy of resolution authorizing the execution of this certificate by the signator of this Bid in behalf of the corporate Bidder.

5. ADDENDA:

Receipt of the following Addenda is hereby acknowledged:

	<u>DATE</u>	<u>SIGNATURE</u>
ADDENDUM NO. 1	_____	_____
ADDENDUM NO. 2	_____	_____
ADDENDUM NO. 3	_____	_____

DATE: _____ SIGNED: _____
(Name of Firm)
BY: _____
(Designate Officer)

6. I understand that the Owner reserves the right to reject this bid, but that this bid shall remain open and not be withdrawn for a period of thirty days from the date prescribed for its opening.
7. Notice of acceptance, or request for additional information, may be addressed to the undersigned at the address set forth below.
8. The names of all persons interested in the foregoing bid as principals are:

(IMPORTANT NOTICE: If bidder or other interested person is a corporation, give legal name of corporation, state where incorporated, and names of president and secretary; if a partnership, give name of firm and names of all individual co-partners composing the firm; if bidder or other interested person is an individual, give first and last name in full)

SIGN HERE:

SIGNATURE OF BIDDER

NOTE: If bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership.

Business Address: _____

Telephone Number: _____

Date of Proposal: _____

TO BE SUBMITTED WITH BID PROPOSAL

STATEMENT OF CONTRACTOR'S QUALIFICATIONS

This statement must be submitted by the Contractor with his proposal. All questions must be answered and the data given must be clear and comprehensive.

1. Name of Bidder _____

_____ PHONE NUMBER _____

2. Permanent main office address _____

3. When organized or began business _____

4. If a corporation, where incorporated _____

5. How many years have you been engaged in the contracting business under your present firm name? _____

6. Have you ever failed to complete any work awarded to you? _____

7. Will you, upon request, submit a detailed financial statement and furnish the following information that may be required by the Owner? _____

- Contacts on hand: (Indicate location, client gross amount of each contract, approximate anticipated dates of completion, A/E name, address and contact person.
- List of contracts of a similar nature performed within the past two years with location, client, gross amount, date of completion, A/E name, address and contact person.
- List of major equipment owned and available within 10 days of award of this contract.
- Background and experience of the principal members of your personnel, including the officers.
- Credit available (written evidence).

- Such statements, if required, shall be notarized and delivered to the Owner within three (3) days of written or verbal request. (Contractor may, at his discretion, elect to submit information as delineated under No. 7 with his Bid Proposal).

8. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Owner in certification of the recitals comprising this Statement of Contractor's Qualifications.

Dated at _____ this _____ day of _____, 20____.

Name of CONTRACTOR

BY _____

TITLE _____

TO BE SUBMITTED WITH BID PROPOSAL
STATEMENT OF CONTRACTOR'S APPRENTICESHIP PROGRAM COMPLIANCE

This statement must be submitted by the Contractor with his proposal. All questions must be answered and the data given must be clear and comprehensive.

1. Name of Bidder _____
2. Phone Number _____
3. Permanent main office address _____

4. When organized or began business _____
5. If a corporation, where incorporated _____
6. How many years have you been engaged in the contracting business under your present firm name? _____
7. Have you ever failed to complete any work awarded to you? _____
8. Please list the Trades expected to be represented on the jobsite under this proposed contract.

9. The undersigned hereby affirms that he/she understands the requirements set forth under Resolution 179 of 2012 wherein the City of Kingston adopts the requirement that contractors and subcontractors on construction contracts exceeding \$100,000 have approved apprenticeship agreements pursuant to NYS Labor Law Section 816-b, and shall comply fully.

Dated at _____ this _____ day of _____, 20____.

Name of CONTRACTOR

BY/TITLE

AGREEMENT

THIS AGREEMENT made this _____ day of _____, 20____ by and between _____
_____ (Name of Owner & Individual) , hereinafter called
"OWNER" and _____ doing business as (an individual) or (a
partnership) or (a corporation) hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter
mentioned:

1. The CONTRACTOR commence and complete the construction of _____
_____.
2. The CONTRACTOR will furnish all of the material, supplies, tools, equipment, labor,
and other services necessary for the construction and completion of the PROJECT described herein.
3. The CONTRACTOR will commence the work required by the CONTRACT
DOCUMENTS within _____ calendar days after the date of the NOTICE TO PROCEED and will
complete the same within _____ calendar days unless the period for completion is extended
otherwise by the CONTRACT DOCUMENTS.
4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT
DOCUMENTS and comply with the terms therein for the sum of \$ _____ as shown
in the BID schedule.
5. The term "CONTRACT DOCUMENTS" means and includes the following:
 - INVITATION TO BIDS
 - INSTRUCTIONS FOR BIDDERS
 - BID
 - AGREEMENT
 - NOTICE OF AWARD
 - NOTICE TO PROCEED
 - CHANGE ORDER
 - CERTIFICATE OF SUBSTANTIAL COMPLETION
 - CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS & CLAIMS
 - GENERAL CONDITIONS
 - SUPPLEMENTAL GENERAL CONDITIONS
 - DRAWINGS prepared by _____

numbered _____ through _____, and dated _____.
SPECIFICATIONS prepared or issued by _____
dated _____.

6. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

7. The Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in three copies, each of which shall be deemed an original on the date first above written.

OWNER:

Name: _____

Signature: _____

By: _____

(Please Print)

Title: _____

(SEAL)

ATTEST:

Signature: _____

Name _____

(Please Print)

Title _____

CONTRACTOR:

Name of Firm: _____

Signature: _____

BY _____

(Please Print)

ADDRESS _____

(SEAL)

ATTEST:

Signature: _____

Name _____

(Please Print)

Title: _____

NOTICE OF AWARD

TO: _____

PROJECT Description: _____

The OWNER has considered the BID submitted by you for the above described WORK in response to its Advertisement for Bids dated _____, 20__ and Invitation for Bidders.

You are hereby notified that your BID has been accepted for items in the amount of \$_____
_____.

You are required by the Information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S Performance BOND. Payment BOND and certificates of Insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within ten (10) days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER'S acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this _____ day of _____, 20_____.

Owner
By _____
Title _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged.

by _____

this the _____ day of _____, 20_____.

By _____

Title _____

NOTICE TO PROCEED

TO: _____

DATE: _____ FED I.D. # _____

ADDRESS: _____

You are hereby notified to commence WORK in accordance with the Agreement dated _____, 20____, on or before _____, 20____, and you are to complete the WORK within _____ consecutive calendar days thereafter. The date of completion of all WORK is therefore _____, 20____.

Owner

By _____

Title _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by _____
_____ this the _____ day of _____, 20____

(Contractor)

By _____

Title _____

CHANGE ORDER

CHANGE ORDER NO. _____
CONTRACT NO. _____

DATE: _____
SHEET _____ OF _____

PROJECT: _____

OWNER: _____

OWNER'S ADDRESS: _____

OWNER'S PHONE NUMBER: _____

CONTRACTOR: _____

CONTRACTOR'S ADDRESS: _____

CONTRACTOR'S PHONE NUMBER: _____

DESCRIPTION OF CONTRACT MODIFICATIONS:

REASON FOR CONTRACT MODIFICATIONS OR NEED FOR EXTRA WORK:

TIME EXTENSION REQUIRED FOR THIS CHANGE ORDER:

ITEMIZATION OF CONTRACTOR'S PROPOSAL FOR THIS WORK:

AUTHORIZATIONS:

OWNER:

By: _____

Title: _____

Date: _____

CONTRACTOR:

By: _____

Title: _____

Date: _____

ENGINEER:

By: _____

Title: _____

Date: _____

CERTIFICATE OF SUBSTANTIAL COMPLETION

OWNER'S Project No. _____

ENGINEER'S Project No. _____

Project _____

CONTRACTOR _____

Contract For _____ Contract Date _____

This Certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

To.....
Owner

And

The Work to which this Certificate applies has been inspected by authorized representatives of OWNER, CONTRACTOR and ENGINEER, and that work is hereby declared to be substantially complete in accordance with the Contract Documents on

.....
Date of Substantial Completion

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents. When this Certificate applies to a specified part of the Work the items in the tentative list shall be completed or corrected by CONTRACTOR within _____ days of the above date of Substantial Completion.

The date of Substantial Completion is the date upon which all guarantees and warranties begin, except as follows:

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities and insurance shall be as follows:

RESPONSIBILITIES:

OWNER: _____

CONTRACTOR: _____

The following documents are attached to and made a part of this Certificate:

Executed by ENGINEER on _____, 20.....

.....
ENGINEER

By

The CONTRACTOR accepts this Certificate of Substantial Completion on _____, 20.....

.....
CONTRACTOR

By

VERIFIED STATEMENT OF PAYMENT OF PREVAILING WAGES - CONTRACTOR

PRC _____ ULSTER COUNTY
Date _____ to
BID or QUOTE # _____

1. _____ (Name of person making statement), begin the _____ (Owner or if Corporation, the title of such officer) of _____ (Full name of Corporation) files this Verified Statement pursuant to Section 220-a of the Labor Law.

2. This Verified Statement involves _____
_____ (Contract number and brief description of public work project).

3. Except as stated herein, there are not amounts due and owing to or on behalf of workers employed on the project by the Contractor. (Set forth any unpaid wages and supplements, and if necessary, attach additional sheets. If none, so state).

4. The Contractor hereby files every verified statement required to be obtained by the Contractor from the subcontractor and the same are attached hereto.

5. Upon information and belief, except as stated herein, all workers of subcontractor (exclusive of executive or supervisory employees) employed on the project have been paid the prevailing wages and supplements for their services through _____, the last day worked on the project by their subcontractor: (Set forth any unpaid wages and supplements, and if necessary, attach additional sheets. If none, so state and utilize clause 5A).

NAME

AMOUNT

5A. The Contractor has no knowledge of amounts owing to or on behalf of any workers.

6. In the event it is determined by the Commissioner of Labor that the wages or supplements or both of any such subcontractors have not been paid or provided pursuant to the appropriate schedule of wages and supplements, then the Contractor acknowledges that it shall be responsible for payment of which wages and supplements pursuant to the provision of Section 223 of the Labor Law.

CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS

AIA Document G706

To: (Owner)

Architect's/Engineer's Project No.
Contract For:

Project:
(name, address)

Contract Date:

State of:

County of:

The undersigned, pursuant to Article 9 of the General Conditions of the Contract for Construction, AIA Document A201, hereby certifies that, except as listed below, he has paid in full or has otherwise satisfied all obligations for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or his property might in any way be held responsible.

EXCEPTIONS: (If none, write "None." If required by the Owner, the Contractor shall furnish bond satisfactory to the Owner for each exception).

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. AIA Document G707, Consent of Surety, may be used for this purpose. Indicate attachment: (yes) (no).
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.
3. Contractor's Affidavit of Release of Lines (AIA Document G706A).

CONTRACTOR:

Address:

By:

Subscribed and sworn to before me this
day of 20__

Notary Public:

My Commission Expires:

CONTRACTORS RELEASE OF LIENS AND WARRANTY

CONTRACT NO. _____
PROJECT: _____
OWNER: City of Kingston
OWNER'S ADDRESS: City Hall
420 Broadway
Kingston, NY 12401
OWNER'S PHONE NUMBER: (845) 334-3967
CONTRACTOR: _____
CONTRACTOR'S ADDRESS: _____

CONTRACTOR'S PHONE NUMBER: _____

KNOW ALL MEN BY THESE PRESENTS:

The undersigned certifies that all work required under this contract has been performed in accordance with the terms thereof, and that there are no unpaid claims for materials, supplies or equipment and no claims of laborers or mechanics for unpaid wages arising out of the performance of this contract.

That in consideration of the final payment the undersigned does hereby release the Owner from any and all claims arising under or by virtue of this contract; provided, however that if for any reason the Owner does not pay in full the amount of the contract, said deduction shall not affect the validity of this release.

The undersigned hereby guarantees the work performed for a period of one year from the date of final acceptance of all the work required by the Contractor, shown on the Certificate of Substantial Completion, as _____ for _____.

He/she also attaches herewith all manufactures and supplies written guarantees and warranties covering materials and equipment furnished under this contract.

Title: _____

Print Name: _____

Signature: _____

Date: _____

GENERAL CONDITIONS

1. Definitions
2. Additional Instructions and Detail Drawings
3. Schedules, Reports and Records
4. Drawings and Specifications
5. Shop Drawings
6. Materials, Services and Facilities
7. Inspection and Testing
8. Substitutions
9. Patents
10. Surveys, Permits, Regulations
11. Protection of Work, Property, Persons
12. Supervision by Contractor
13. Changes in the Work
14. Changes in Contract Price
15. Time for Completion and Liquidated Damages
16. Correction of Work
17. Subsurface Conditions
18. Suspension of Work Termination and Delays
19. Payments to the Contractor
20. Acceptance of Final Payment as Release
21. Insurance
22. Contract Security
23. Assignments
24. Indemnification
25. Separate Contracts
26. Subcontracting
27. Engineer's Authority
28. Land and Rights-of-Way
29. Guaranty
30. Claims and Disputes

1. DEFINITIONS

1.1 Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:

1.2 ADDENDA - Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the CONTRACT DOCUMENTS, DRAWINGS and SPECIFICATIONS, by additions, deletions, clarifications or corrections.

1.3 BID - The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.

1.4 BIDDER - Any person, firm or corporation submitting a BID for the WORK.

1.5 BONDS - Bid, Performance and Payment Bonds and other instruments of security furnished by the CONTRACTOR and his surety in accordance with the CONTRACT DOCUMENTS.

1.6 CHANGE ORDER - A written order to the CONTRACTOR authorizing an addition, deletion or revision in the WORK within the general scope of the CONTRACT DOCUMENTS, or authorizing adjustment in the CONTRACT PRICE or CONTRACT TIME.

1.7 CONTRACT DOCUMENTS - The contract, including Advertisement for Bids, Information for Bidders, BID, Bid Bond, Agreement, Payment Bond, Performance Bond, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, SPECIFICATIONS, and ADDENDA.

1.8 CONTRACT PRICE - The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.

1.9 CONTRACT TIME - The number of calendar days in the CONTRACT DOCUMENTS for the completion of the WORK from the Notice to Proceed.

1.10 CONTRACTOR - The person, firm or corporation with whom the OWNER has executed the Agreement.

1.11 DRAWINGS - The part of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared by the ENGINEER.

1.12 ENGINEER - The person, firm or corporation named as such in the CONTRACT DOCUMENTS. The term ENGINEER shall be interchangeable with ARCHITECT in this document.

1.13 FIELD ORDER - A written order effecting a change in the WORK, not involving an adjustment in the CONTRACT PRICE, or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.

1.14 NOTICE OF AWARD - The written notice of the acceptance of the BID from the OWNER to the successful BIDDER.

1.15 NOTICE TO PROCEED - Written communication issued by the OWNER to the CONTRACTOR authorizing him to proceed with the WORK and establishing the date of commencement of the WORK.

1.16 OWNER - A public or quasi-public body or authority, corporation, association, partnership,

or individual for whom the WORK is to be performed.

1.17 PROJECT - The undertaking to be performed as provided in the CONTRACT DOCUMENTS.

1.18 RESIDENT PROJECT REPRESENTATIVE - The authorized representative of the OWNER who is assigned to the PROJECT site or any part thereof.

1.19 SHOP DRAWINGS - All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER, or distributor, which illustrate how specific portion of the WORK shall be fabricated or installed.

1.20 SPECIFICATIONS - A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.

1.21 SUBCONTRACTOR - An individual, firm, or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.

1.22 SUBSTANTIAL COMPLETION - That date as certified by the ENGINEER when the construction of the PROJECT or a specified part thereof is sufficiently completed, in accordance with the CONTRACT DOCUMENTS, so that the PROJECT or specified part can be utilized for the purpose for which it is intended.

1.23 SUPPLEMENTAL GENERAL CONDITIONS - Modifications to General Conditions required by special conditions of the Owner or other agencies that have special requirements.

1.24 SUPPLIER - Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.

1.25 WORK - All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.

1.26 WRITTEN NOTICE - Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the WORK.

2. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

2.1 The CONTRACTOR may be furnished additional instructions and detail drawings, by the ENGINEER, as necessary to carry out the WORK required by the CONTRACT DOCUMENTS.

2.2 The additional drawings and instruction thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawings and instructions.

3. SCHEDULES, REPORTS AND RECORDS

3.1 The CONTRACTOR shall submit to the OWNER such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable for the WORK to be performed.

3.2 Prior to the first partial payment estimate, the CONTRACTOR shall submit construction progress schedules showing the order in which he proposes to carry on the WORK, including dates at which he will start the various parts of the WORK, estimated date of completion of each part and, as applicable:

3.2.1. The dates at which special detail drawings will be required; and

3.2.2. Respective dates for submission of SHOP DRAWINGS, the beginning of manufacture, the testing and the installation of materials, supplies and equipment.

3.3 The CONTRACTOR shall also submit a schedule of payments that he anticipates he will earn during the course of the WORK.

4. DRAWINGS AND SPECIFICATIONS

4.1 The intent of the DRAWINGS and SPECIFICATIONS is that the CONTRACTOR shall furnish all, labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and all incidental work necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy or operation by the OWNER.

4.2 In case of conflict between the DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS shall govern. Figure dimensions on DRAWINGS shall govern over scale dimensions, and detailed DRAWINGS shall govern over general DRAWINGS.

4.3 Any discrepancies found between the DRAWINGS and SPECIFICATIONS and site conditions or any inconsistencies or ambiguities shall be done at the CONTRACTOR'S risk.

5. SHOP DRAWINGS

5.1 The CONTRACTOR shall provide SHOP DRAWINGS as may be necessary for the prosecution of the WORK as required by the CONTRACT DOCUMENTS. The ENGINEER shall promptly review all SHOP DRAWINGS. The ENGINEER'S approval of any SHOP DRAWINGS shall not

release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS. The approval of any SHOP DRAWINGS which substantially deviates from the requirement of the CONTRACT DOCUMENTS shall be evidenced by a CHANGE ORDER.

5.2 When submitted for the ENGINEER'S review, SHOP DRAWINGS shall bear the CONTRACTOR'S certification that he has reviewed, checked and approved the SHOP DRAWINGS and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.

5.3 Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWINGS or submission has been approved by the ENGINEER. A copy of each approved SHOP DRAWING and such approved sample shall be kept in good order by the CONTRACTOR at the site and shall be available to the ENGINEER.

6. MATERIALS, SERVICES AND FACILITIES

6.1 It is understood that except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature whatsoever necessary to execute, complete and deliver the WORK within the specified time.

6.2 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the WORK. Stored materials and equipment to be incorporated in the WORK shall be located so as to facilitate prompt inspection.

6.3 Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.

6.4 Materials, supplies and equipment shall be in accordance with samples, submitted by the CONTRACTOR and approved by the ENGINEER.

6.5 Materials, supplies and equipment incorporated into the WORK shall not be purchased by the CONTRACTOR or the SUBCONTRACTOR subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

7. INSPECTION AND TESTING

7.1 All materials and equipment used in the construction of the PROJECT shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the CONTRACT DOCUMENTS.

7.2 The OWNER shall provide all inspection and testing services not required by the CONTRACT DOCUMENTS.

7.3 The CONTRACTOR shall provide at his expense the testing and inspection services required by the CONTRACT DOCUMENTS.

7.4 If the CONTRACT DOCUMENTS, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any WORK to specifically be inspected or approved by someone other than the CONTRACTOR, the CONTRACTOR will give the ENGINEER timely notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing or approval.

7.5 Inspections, tests or approvals by the ENGINEER or others shall not relieve the CONTRACTOR from his obligations to perform the WORK in accordance with the requirements of the CONTRACT DOCUMENTS.

7.6 The ENGINEER and his representatives will at all times have access to the WORK. In addition, authorized representatives and agents of any participating Federal or state agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The CONTRACTOR will provide proper facilities for such access and observation of the WORK and also for any inspection, or testing thereof.

7.7 If any WORK is covered contrary to the written instructions of the ENGINEER, it must, if requested by the ENGINEER, be uncovered for his observation and replaced at the CONTRACTOR'S expense.

7.8 If the ENGINEER considers it necessary or advisable that covered WORK be inspected or tested by others, the CONTRACTOR, at the ENGINEER'S request, will uncover, expose or otherwise make available for observation, inspection or testing as the ENGINEER may require, that portion of the WORK in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such WORK is defective, the CONTRACTOR will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such WORK is not found to be defective, the CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate CHANGE ORDER shall be issued.

8. SUBSTITUTIONS AND EQUIVALENCY

8.1 Whenever a material, article or piece of equipment is identified on the DRAWINGS or SPECIFICATIONS by reference to brand name or catalogue number, it shall be understood that this is reference for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The CONTRACTOR may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the CONTRACT DOCUMENTS by reference to brand name or catalogue number, and if in the opinion of the ENGINEER, such material, article or piece of

equipment is of equal substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. Any cost differential shall be deductible from the CONTRACT PRICE and the CONTRACT DOCUMENTS shall be appropriately modified by CHANGE ORDER. The CONTRACTOR warrants that if substitutes are approved, no major changes in the function or general design of the PROJECT will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without a change in the CONTRACT PRICE or CONTRACT TIME.

9. PATENTS

9.1 The CONTRACTOR shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the OWNER harmless from loss and account thereof, except that the OWNER shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified, however, if the CONTRACTOR has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the ENGINEER.

10. SURVEYS, PERMITS, REGULATIONS

10.1 The OWNER shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the WORK together with a suitable number of bench marks adjacent to the WORK as shown in the CONTRACT DOCUMENTS. From the information provided by the OWNER, unless otherwise specified in the CONTRACT DOCUMENTS, the CONTRACTOR shall develop and make all detail surveys needed for construction such as slope, stakes, batter boards, stakes for pile locations and other working points, lines, elevations and cut sheets.

10.2 The CONTRACTOR shall carefully preserve bench marks, reference points, and stakes and in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

10.3 Permits and licenses of a temporary nature necessary for the prosecution of the WORK, shall be secured and paid for by the CONTRACTOR unless otherwise stated in the SUPPLEMENTAL GENERAL CONDITIONS. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the OWNER unless otherwise specified. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the WORK as drawn and specified. If the CONTRACTOR observes that the CONTRACT DOCUMENTS are at variance herewith, he shall promptly notify the ENGINEER in writing, and any necessary changes shall be adjusted as provided in Section 13. CHANGES IN THE WORK.

11. PROTECTION OF WORK, PROPERTY AND PERSONS

11.1 The CONTRACTOR will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the WORK. He will take all necessary precautions for the safety of and will provide the necessary protection to prevent damage, injury or loss to all employees on the WORK and other persons who may be affected thereby, all the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the site and other property at the site or adjacent thereto, including trees, scrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation or replacement in the course of construction.

11.2 The CONTRACTOR will comply with all applicable laws, ordinances, rules, regulations and orders of any public body, having jurisdiction. He will erect and maintain as required by the conditions and progress of the WORK, all necessary safeguards for safety and protection. He will notify owners of adjacent utilities when prosecution of the WORK may affect them. The CONTRACTOR will remedy all damage, injury or loss to any property caused directly or indirectly, in whole or in part, by the CONTRACTOR, any SUBCONTRACTOR or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or to the acts or omissions of the OWNER or the ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part to the fault or negligence of the CONTRACTOR.

11.3 In emergencies affecting the safety of persons or the WORK or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER or OWNER, shall act to prevent threatened damage, injury, or loss. He will give the ENGINEER prompt WRITTEN NOTICE of any significant changes in the WORK or deviations from the CONTRACT DOCUMENTS caused thereby, and a CHANGE ORDER shall thereupon be issued covering the changes and deviations involved.

12. SUPERVISION BY CONTRACTOR

12.1 The CONTRACTOR will supervise and direct the WORK. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The CONTRACTOR will employ and maintain on the WORK a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the CONTRACTOR'S representatives at the site. The supervisor shall have full authority to act on behalf of the CONTRACTOR and all communications given to the supervisor shall be as binding as if given to the CONTRACTOR. The supervisor shall be present on the site at all times as required to perform adequate supervisor and coordination of the WORK.

13. CHANGES IN THE WORK

13.1 The OWNER may at any time, as the need arises, order changes within the scope of the WORK without invalidating the Agreement. If such changes increase or decrease the amount due under the

CONTRACT DOCUMENTS, or in the time required for the performance of the WORK, an equitable adjustment shall be authorized by CHANGE ORDER.

13.2 The ENGINEER, also may at any time by issuing a FIELD ORDER, make changes in the details of the WORK. The CONTRACTOR shall proceed with the performance of any changes in the WORK so ordered by the ENGINEER unless the CONTRACTOR believes that such FIELD ORDER entitles him to a change in CONTRACT PRICE or TIME, or both, in which event he shall give the ENGINEER WRITTEN NOTICE thereof within seven (7) days after the receipt of the ordered change. Thereafter the CONTRACTOR shall document the basis for the change in CONTRACT PRICE or TIME within thirty (30) days. The CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER or further instruction from the OWNER.

14. CHANGES IN THE CONTRACT PRICE

14.1 The CONTRACT PRICE may be changed only by a CHANGE ORDER. The value of any WORK covered by a CHANGE ORDER or of any claim for increase or decrease in the CONTRACT PRICE shall be determined by one or more of the following methods in the order of precedence listed below:

- (a) Unit prices previously approved.
- (b) An agreed lump sum.
- (c) The actual cost for labor, direct overhead, materials, supplies, equipment and other services necessary to complete the work. In addition, there shall be added an amount to be agreed upon but not to exceed the following percentages:
 - (1) Contractor's Overhead Percentage, 10%.
 - (2) Contractor's Profit Percentage, 10%.
 - (3) If work is done by a subcontractor:
 - Subcontractor's Overhead Percentage, 5%
 - Subcontractor's Profit Percentage, 10%
 - Contractor's Combined Overhead and Profit Percentage, 10%
 - (4) Equipment or material furnished directly to Owner, 10%

15. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

15.1 The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on a date specified in the NOTICE TO PROCEED.

15.2 The CONTRACTOR will proceed with the WORK at such rate of progress to insure full completion within the CONTRACT TIME. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and

economic conditions and other factors prevailing in the locality of the WORK.

15.3 If the CONTRACTOR shall fail to complete the WORK within the CONTRACT TIME, or extension of time granted by the OWNER, then the CONTRACTOR will pay to the OWNER the amount for liquidated damages if specified in the BID for each calendar day that the CONTRACTOR shall be in default after the time stipulated in the CONTRACT DOCUMENTS.

15.4 The CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due to the following and the CONTRACTOR has promptly given WRITTEN NOTICE of such delay to the OWNER or ENGINEER.

15.4.1 To any preference, priority or allocation.

15.4.2 To unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including but not restricted to acts of God, or of the public enemy, acts of the OWNER, acts of another CONTRACTOR in the performance of a contract with the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and abnormal and unforeseeable weather; and

15.4.3 To any delays of SUBCONTRACTORS occasioned by any of the causes specified in paragraphs 15.4.1 and 15.4.2 of this article.

16. CORRECTIONS OF WORK

16.1 The CONTRACTOR shall promptly remove from the premises all WORK rejected by the ENGINEER for failure to comply with the CONTRACT DOCUMENTS, whether incorporated in the construction or not, and the CONTRACTOR shall promptly replace and re-execute the WORK in accordance with the CONTRACT DOCUMENTS and without expense to the OWNER and shall bear the expense of making good all WORK, of other CONTRACTORS destroyed or damaged by such removal or replacement.

16.2 All removal and replacement WORK shall be done at the CONTRACTOR'S expense. If the CONTRACTOR does not take action to remove such rejected WORK within ten (10) days after receipt of WRITTEN NOTICE, the OWNER may remove such WORK and store the materials at the expense of the CONTRACTOR.

17. SUBSURFACE CONDITIONS

17.1 The CONTRACTOR shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the OWNER by WRITTEN NOTICE of:

17.1.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the CONTRACT DOCUMENTS; or

17.1.2 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in WORK of the character provided for in the CONTRACT DOCUMENTS.

17.2 The OWNER shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the WORK, an equitable adjustment shall be made and the CONTRACT DOCUMENTS shall be modified by a CHANGE ORDER. Any claim of the CONTRACTOR for adjustment hereunder shall not be allowed unless he has given the required WRITTEN NOTICE; provided that the OWNER may, if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payments.

18. SUSPENSION OF WORK, TERMINATION AND DELAY

18.1 The OWNER may suspend the WORK or any portion thereof for a period of not more than ninety days or such further time as agreed upon by the CONTRACTOR, by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER which notice shall fix the date on which WORK shall be resumed. The CONTRACTOR will resume that WORK on the date so fixed. The CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to any suspension.

18.2 If the CONTRACTOR is adjudged a bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of his property, or if he files a petition to take advantage of any debtor's act, or to recognize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to SUBCONTRACTORS or for labor, materials, or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the WORK or if he disregards the authority of the ENGINEER, or if he otherwise violates any provision of the CONTRACT DOCUMENTS, then the OWNER may without prejudice to any other right or remedy and after giving the CONTRACTOR and his surety a minimum of ten (10) days from delivery of a WRITTEN NOTICE terminate the services of the CONTRACTOR and take possession of the PROJECT and of all materials, equipment, tools, construction equipment and machinery thereon owned by the CONTRACTOR, and finish the WORK by whatever method he may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the WORK is finished. If the unpaid balance of the CONTRACT PRICE exceeds the direct and indirect costs of completing the PROJECT, including compensation for additional professional services, such excess SHALL BE PAID TO THE CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR will pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the ENGINEER and incorporated in a CHANGE ORDER.

18.3 Where the CONTRACTOR'S services have been so terminated by the OWNER, said termination shall not affect any right of the OWNER against the CONTRACTOR then existing or

which may thereafter accrue. Any retention or payment of monies by the OWNER due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.

18.4 After ten (10) days from delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the PROJECT and terminate the CONTRACT. In such case, the CONTRACTOR shall be paid for all WORK executed and any expense sustained plus reasonable profit.

18.5 If, through no act or fault of the CONTRACTOR, the WORK is suspended for a period of more than ninety (90) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment within thirty (30) days after it is submitted, or the OWNER fails to pay the CONTRACTOR substantially the sum approved by the ENGINEER or awarded by arbitrators within thirty (30) days of its approval and presentation, then the CONTRACTOR may, after ten (10) days from delivery of a WRITTEN NOTICE to the OWNER and the ENGINEER, terminate the CONTRACT and recover from the OWNER payment for all WORK executed and all expenses sustained. In addition and in lieu of terminating the CONTRACT, if the ENGINEER has failed to act on a request for payment or if the OWNER has failed to make any payment as aforesaid, the CONTRACTOR may, upon ten (10) days written notice to the OWNER and the ENGINEER, stop all WORK until he has been paid all amounts then due in which event and upon resumption of the WORK, CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME or both to compensate for the costs and delays attributable to the stoppage of the WORK.

18.6 If the performance of all or any portion of the WORK is suspended, delayed, or interrupted as a result of a failure of the OWNER or ENGINEER to act within the time specified in the CONTRACT DOCUMENTS or if not time is specified, within a reasonable time, an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, shall be made by CHANGE ORDER to compensate the CONTRACTOR for the costs and delays necessarily caused by the failure of the OWNER or ENGINEER.

19. PAYMENTS TO CONTRACTOR

19.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR will submit to the ENGINEER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the ENGINEER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the WORK but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data satisfactory to the OWNER, as will establish the OWNER'S title to the material and equipment and protect his interest therein, including applicable insurance. The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the OWNER,

or return the partial payment estimate to the CONTRACTOR, indicating in writing his reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, within ten (10) days of presentation to him of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate. The OWNER shall retain five (5) percent of the amount of each payment until final completion and acceptance of all work covered by the CONTRACT DOCUMENTS. The New York State Laws of 1978, Chapter 769, Section 106b, allow retainage only up to five (5%) percent.

When the WORK is substantially complete (operational or beneficial occupancy), the retained amount may be further reduced below five (5) percent to only that amount necessary to assure completion. On completion and acceptance of a part of the WORK on which the price is stated separately in the CONTRACT DOCUMENTS, payment may be made in full, including retained percentages, less authorized deductions.

19.2 The request for payment may also include an allowance for the cost of such major materials and equipment which are suitably stored either at or near the site.

19.3 Prior to SUBSTANTIAL COMPLETION, the OWNER, with the approval of the ENGINEER and with the concurrence of the CONTRACTOR, may use any completed or substantially completed portion of the WORK. Such use shall not constitute an acceptance of such portions of the WORK.

19.4 The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the WORK, or the restoration of any damaged WORK, except such as may be caused by agents or employees of the OWNER.

19.5 Upon completion and acceptance of the WORK, the ENGINEER shall issue a certificate attached to the final payment request that the WORK has been accepted by him under the conditions of the CONTRACT DOCUMENTS. The entire balance found to be due the CONTRACTOR, including the retained percentages, but except such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the WORK.

19.6 The CONTRACTOR will indemnify and save the OWNER or the OWNERS agents harmless from all claims growing out of the lawful demands of SUBCONTRACTORS, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, tools and all supplies incurred in the furtherance of the performance of the WORK. The CONTRACTOR shall, at the OWNER'S request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the CONTRACTOR fails to do so the OWNER may, after having notified the CONTRACTOR, either pay unpaid bills or withhold from the CONTRACTOR'S unpaid compensation a sum of money deemed reasonably sufficient to pay any

and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the CONTRACTOR shall be resumed, in accordance with the terms of the CONTRACT DOCUMENTS, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the CONTRACTOR, his Surety, or any third party. In paying any unpaid bills of the CONTRACTOR any payment so made by the OWNER shall be considered as a payment made under the CONTRACT DOCUMENTS by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.

19.7 If the OWNER fails to make payment thirty (30) days after approval by the ENGINEER, in addition to other remedies available to the CONTRACTOR, there shall be added to each such payment interest at the maximum legal rate commencing on the first day after said payment is due and continuing until the payment is received by the CONTRACTOR.

20. ACCEPTANCE OF FINAL PAYMENT AS RELEASE

20.1 The acceptance of the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this WORK and for every act and neglect of the OWNER and others relating to or arising out of this WORK. Any payment, however, final or otherwise, shall not release the CONTRACTOR or his Sureties from any obligations under the CONTRACT DOCUMENTS or the PERFORMANCE BOND and PAYMENT BONDS.

21. INSURANCE

21.1 The CONTRACTOR shall purchase and maintain such insurance as will protect him from claims set forth below which may arise out of or result from the CONTRACTOR'S execution of the WORK, whether such execution be by himself or by any SUBCONTRACTOR or by anyone directly or indirectly employed by any of them or by anyone whose acts of them may be liable.

21.1.1 Claims under workmen's compensation, disability benefit and other similar employee benefit acts;

21.1.2 Claims for damages because of bodily injury, occupational sickness, or disease or death of his employees;

21.1.3 Claims for damages because of bodily injury, sickness, or disease or death of any person other than his employees.

21.1.4 Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR, or (2) by any other persons and

21.1.5 Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.

21.2 Certificates of Insurance acceptable to the OWNER shall be filed with the OWNER prior to commencement of the WORK. These Certificates shall contain a provision that coverages afforded under the policies will not be cancelled unless at least fifteen (15) days prior to WRITTEN NOTICE has been given to the OWNER.

21.3 The CONTRACTOR shall procure and maintain, at his expense, during the CONTRACT TIME, liability insurance as hereinafter specified:

21.3.1 CONTRACTOR'S general Public Liability and Property Damage Insurance including vehicle coverage issued to the CONTRACTOR and protecting him from all claims for personal injury, including death and all claims for destruction of or damage to property arising out of or in connection with any operations under the CONTRACT DOCUMENTS, whether such operations be by himself or by any SUBCONTRACTOR under him or anyone directly or indirectly employed by the CONTRACTOR or by a SUBCONTRACTOR under him. Insurance shall be written with a limit of liability of not less than \$5,000,000 for all damages arising out of bodily injury, including death, at any time resulting therefrom, sustained by any one person in any one accident and a limit of liability of not less than \$5,000,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than \$5,000,000 for all property damage sustained by any one person in any one accident and a limit of liability of not less than \$5,000,000 aggregate for any such damage sustained by two or more persons in any one accident.

21.3.2 The CONTRACTOR shall acquire and maintain, if applicable, Fire and Extended Coverage insurance upon the PROJECT to the full insurable value thereof for the benefit of the OWNER, the CONTRACTOR, and SUBCONTRACTORS as their interest may appear. This provision shall in no way release the Contractor or CONTRACTOR'S Surety from obligations under the CONTRACT DOCUMENTS to fully complete the PROJECT.

21.4 The CONTRACTOR shall procure and maintain at his own expense, during the CONTRACT TIME in accordance with the provisions of the laws of the state in which the work is being performed. Workmen's Compensation Insurance including occupational disease provisions for all of his employees at the site of the PROJECT and in case any work is sublet, the CONTRACTOR shall require such SUBCONTRACTOR similarly to provide Workmen's Compensation Insurance, including occupational disease provisions for all of the latter's employees unless such employees are covered by the protection afforded by the CONTRACTOR. In case any class of employees engaged in hazardous work under this contract at the site of the PROJECT is not protected under Workmen's Compensation statute, the CONTRACTOR shall provide and shall cause each SUBCONTRACTOR to provide adequate and suitable insurance for the protection of his employees not otherwise protected.

21.5 The CONTRACTOR shall secure, if applicable, "All Risk" type Builders Risk Insurance for WORK to be performed. Unless specifically authorized by the OWNER, the amount of such insurance shall not be less than the CONTRACT PRICE totaled in the BID. The policy shall cover not less than the losses due to fire, explosion, hail, lightening, vandalism, malicious mischief, wind, collapse, riot, aircraft, and smoke during the CONTRACT TIME, and until the WORK is accepted by the OWNER. The policy shall name as the insured the CONTRACTOR, the ENGINEER and the OWNER.

22. CONTRACT SECURITY

22.1 The CONTRACTOR shall within ten (10) days after the receipt of the NOTICE OF AWARD furnish the OWNER with a PERFORMANCE BOND and a PAYMENT BOND in penal sums equal to the amount of the CONTRACT PRICE conditioned upon the performance of the CONTRACTOR of all undertakings, covenants, terms, conditions and agreements of the CONTRACT DOCUMENTS, and upon the prompt payment by the CONTRACTOR to all persons supplying labor and materials in the prosecution of the WORK provided by the CONTRACT DOCUMENTS. Such BONDS shall be executed by the CONTRACTOR and a corporate bonding company licensed to transact such business in the state in which the WORK is to be performed. The expense of these BONDS shall be borne by the CONTRACTOR. If at any time a Surety on any such BOND is declared a bankrupt or loses its right to do business in the state in which the WORK is to be performed or is removed from the list of Surety Companies accepted on Federal BONDS, CONTRACTOR shall within ten (10) days after notice from the OWNER to do so substitute an acceptable BOND (or BONDS) in such form and sum and signed by such other Surety or Sureties as may be satisfactory to the OWNER. The premiums on such BOND shall be paid by the CONTRACTOR. No further payments shall be deemed due not shall be made until the new Surety or Sureties shall have furnished an acceptable BOND to the OWNER.

23. ASSIGNMENTS

23.1 Neither the CONTRACTOR nor the OWNER shall sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof or of his right, title or interest therein or his obligations thereunder, without written consent of the other party.

24. INDEMNIFICATION

24.1 The CONTRACTOR will indemnify and hold harmless the OWNER and the ENGINEER and their agents and employees from and against all claims, damages, losses and expenses, including attorney's fees arising out of or resulting from the performance of the WORK provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death or to injury or to destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the CONTRACTOR, and SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose

acts any of them may be liable.

24.2 In any and all claims against the OWNER or the ENGINEER, or any of their agents or employees, by any employee of the CONTRACTOR, any SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under the Workmen's Compensation acts, disability benefit acts or other employee benefit acts.

24.3 The obligation of the CONTRACTOR under this paragraph shall not extend to the liability of the ENGINEER, his agents or employees arising out of the preparation or approval of maps, DRAWINGS, opinions, reports, surveys, CHANGE ORDERS, designs or SPECIFICATIONS.

25. SEPARATE CONTRACTS

25.1 The OWNER reserves the right to let other contracts in connection with this PROJECT. The CONTRACTOR shall afford other CONTRACTORS reasonable opportunity for the introduction and storage of their materials and the execution of their WORK, and shall properly connect and coordinate his WORK with theirs. If the proper execution or results of any part of the CONTRACTOR'S WORK depends upon the WORK of any other CONTRACTOR, the CONTRACTOR shall inspect and promptly report to the ENGINEER, any defects in such WORK that render it unsuitable for such proper execution and results.

25.2 The OWNER may perform additional WORK related to the PROJECT by himself, or he may let other contracts containing provisions similar to these. The CONTRACTOR will afford the other CONTRACTORS who are parties to such Contracts (or the OWNER, if he is performing the additional WORK himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of WORK and shall properly connect and coordinate his WORK with theirs.

25.3 If the performance of additional WORK by other CONTRACTORS or the OWNER is not noted in the CONTRACT DOCUMENTS prior to the execution of the CONTRACT, written notice thereof shall be given to the CONTRACTOR prior to starting any such additional WORK. If the CONTRACTOR believes that the performance of such additional WORK by the OWNER or others involves him in additional expense or entitles him to an extension of the CONTRACT TIME, he may make a claim therefor as provided in Sections 14 and 15.

26. SUBCONTRACTING

26.1 The CONTRACTOR may utilize the services of specialty SUBCONTRACTORS on those parts of the WORK which under normal contracting practices, are performed by specialty SUBCONTRACTORS.

26.2 The CONTRACTOR shall not award WORK to SUBCONTRACTOR(S) in excess of fifty (50%) percent of the CONTRACT PRICE without prior written approval of the OWNER.

26.3 The CONTRACTOR shall be fully responsible to the OWNER for the acts and omissions of his SUBCONTRACTORS, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of person directly employed by him.

26.4 The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the WORK to bind SUBCONTRACTORS to the CONTRACTOR by the terms of the CONTRACT DOCUMENTS insofar as applicable to the WORK of SUBCONTRACTORS and to give the CONTRACTOR the same power as regards terminating any subcontract that the OWNER may exercise over the CONTRACTOR under any provisions of the CONTRACT DOCUMENTS.

26.5 Nothing contained in the CONTRACT shall create any contractual relation between the SUBCONTRACTOR and the OWNER.

27. ENGINEER'S AUTHORITY

27.1 The ENGINEER shall act as the OWNER'S representative during the construction period. He shall decide questions which may arise as to quality and acceptability of materials furnished and WORK performed. He shall interpret the intent of the CONTRACT DOCUMENTS in a fair and unbiased manner. The ENGINEER will make visits to the site and determine if the WORK is proceeding in accordance with the CONTRACT DOCUMENTS.

27.2 The CONTRACTOR will be held strictly to the intent of the CONTRACT DOCUMENTS in regard to the quality of materials, workmanship and execution of the WORK. Inspections may be made at the factory or fabrication plant of the source of material supply.

27.3 The ENGINEER will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

27.4 The ENGINEER shall promptly make decisions relative to interpretation of the CONTRACT DOCUMENTS.

28. LAND AND RIGHTS-OF-WAY

28.1 Prior to issuance of NOTICE TO PROCEED, the OWNER shall obtain all land and rights-of-way necessary for carrying out and for the completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS unless otherwise mutually agreed.

28.2 The CONTRACTOR shall provide at his own expense and without liability to the OWNER any additional land and access thereto that the CONTRACTOR may desire for temporary construction facilities, or for storage of materials.

29. GUARANTY

29.1 The CONTRACTOR shall guarantee all materials and equipment furnished and WORK performed for a period of one (1) year from the date of SUBSTANTIAL COMPLETION. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of SUBSTANTIAL COMPLETION of the system that the completed system is free from all defects due to faulty materials or workmanship and the CONTRACTOR shall promptly make such corrections as be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The OWNER will give notice of observed defects with reasonable promptness. In the event that such CONTRACTOR should fail to make such repairs, adjustments or other WORK that may be made necessary by such defects, the OWNER may do so and charge the CONTRACTOR the cost thereby incurred. The PERFORMANCE BOND shall remain in full force and effect through the guarantee period.

30. CLAIMS AND DISPUTES

30.1 All claims, disputes and other matters in question arising out of, or relating to the CONTRACT DOCUMENTS or the breach thereof, shall be decided in the courts of the State of New York. Arbitration shall not be a means of resolution unless all parties agree to arbitration as an acceptable alternative.

SUPPLEMENTAL GENERAL CONDITIONS

1. Shop Drawings

The Contractor shall submit promptly, two (2) copies of each Shop or Setting drawing prepared in accordance with the schedule predetermined under the provisions of Section 01340; the Contractor shall make such corrections to the drawings as have been indicated and shall furnish the Engineer with two additional copies. Regardless of corrections made in or approval given to such drawings by the Engineer, the Contractor will nevertheless be responsible for the accuracy of such drawings and for their conformity to the plans and specifications unless he notifies the Engineer in writing of any deviations at the time he furnished such drawings.

2. Insurance

Article 21 of the General Conditions, page GC-14, shall be amended in general to name as the insured, the Contractor, the Owner (City of Kingston), Architect (Guardia Architects), Connolly Engineering, PLLC, Taconic Site Design and Landscape Architecture, Brinnier and Larios, P.C., Michael Stiller and Arun Rimal as additional insureds.

Article 21.3.1 shall remain the same except for the limits which shall be:

Bodily Injury Liability - Minimum coverage of \$2,000,000.00 each accident - not aggregate.

Article 21.4 shall remain in tact except that Compensation insurance shall be provided in accordance with the Workmen's Compensation Laws of the State of New York.

Article 21.5--"All Risk" insurance shall be provided.

3. Protection of Lives and Health

In order to protect the lives and health of his employees under the Contract, the Contractor shall comply with all pertinent provisions of the "Manual of Accident Prevention in Construction" issued by the Associated General Contractors of American, Inc., and shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment or work under the contract. The Contractor alone shall be responsible for the safety, efficiency and adequacy of his plant, appliances, and methods, and for any damage which may result from their failure or their improper construction, maintenance, or operation.

4. Other Prohibited Interests

No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiating, making, accepting, or approving any engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the project, shall be come directly or indirectly interested personally in this contract or in any part hereof. No officer, employee, architect, attorney, engineer, or inspector of or for the owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall be come directly or indirectly interested personally in this contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

5. Suspension of Work

Add to Section 18, Suspension of Work, Termination and Delay:

Should the Owner be prevented or enjoined from proceeding with work either before or after the start of construction by reason of any litigation or other reason beyond the control of the Owner, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay; but time for completion of the work will be extended to such reasonable time as the Owner may determine will compensate for time lost by such delay with such determination to be set forth in writing.

6. Minimum Wages

- (a) The Contractor shall post at appropriate conspicuous points at the site of the project a schedule showing all determined minimum wage rates for the various classes of laborers and mechanics to be engaged in work on the project under this contract and all deductions, if any, required by law to be made from unpaid wages actually earned by the laborers and mechanics so engaged.
- (b) There shall be paid each laborer or mechanic of the Contractor or Subcontractor engaged in work on the project under this contract in the trade or occupation listed in the Supplemental General Conditions, not less than the hourly rate opposite the same, regardless of any contractual relationship which may be alleged to exist between the Contractor or any Subcontractor and such laborers and mechanics.
- (c) If, after the award of the Contract, it becomes necessary to employ any person in a

trade or occupation not classified in the above list, such person shall be paid not less than a rate to be determined by the same authority which established the other wage rates for this contract. Such approved minimum rate shall be retroactive to the time of the initial employment of such person in such trade or occupation. The Contractor shall notify the Owner of his intention to employ persons in trades or occupations not classified in sufficient time for the Owner to obtain approved rates for such trades or occupations.

- (d) The specified wage rates are minimum rates only, and the Owner will not consider any claim for additional compensation made by the Contractor because of payment by the Contractor of any wage rate in excess of the applicable rate contained in this contract. All disputes in regard to the payment of wages in excess of those specified in this contract shall be adjusted by the Contractor.
- (e) Except as may be otherwise required by law, all claims and disputes pertaining to the classification of labor employed on the project under this contract shall be decided by the Owner's governing body or other duly designated official.
- (f) The Contractor and each of his subcontractors shall pay each of his employees engaged in work on the project under this contract in full (less deductions made mandatory by law) in cash and not less often than once each week less legally required deductions and also deductions made pursuant to the regulation prescribed under the so-called "Anti-Kickback Statute" (48 Stat. 948; 18 U.S.C. 874; 40 U.S.C. 276c): Provided, that when circumstances render payment in cash infeasible or impracticable, payment by check may be effected upon consideration that funds are made available in a local bank and checks may be without charge, trade requirements, or inconvenience to the worker.

7. Withholding of Payments

Add to Section 19, Payments to Contractor, Page GC-12:

The Contractor agrees that, in case of underpayment of wages to any worker on the project under this contract by the Contractor or any subcontractor, the Owner shall withhold from the Contractor out of payments due, an amount sufficient to pay such worker the difference between the wages required to be paid under this contract and the wages actually paid such worker for the total number of hours worked and that the Owner may disburse such amount so withheld by it for and on account of the Contractor to the employee to whom such amount is due. The Contractor further agrees that the amount to be withheld pursuant to this paragraph may be in addition to the percentages to be retained by the Owner pursuant to other provisions of this contract.

8. Payrolls and Payroll Records

- (a) Payrolls and basic payroll records will be maintained during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records will contain the name and address of each such employee, his correct classification, rate of pay, daily and weekly number of hours worked, deductions made and actual wages paid.

9. Compliance with Copeland Anti-Kickback Act and Regulations

The Contract shall comply with the Copeland Anti-Kickback Act and Regulations of the Secretary of Labor (29 CFR, Part 3) which are herein incorporated by reference.

10. Overtime

- (a) No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics, including watchmen and guards, shall require or permit any laborer or mechanic in any workweek in which he is employed on such work to work in excess of eight hours in any calendar day or in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate of not less than one and one-half times his basic rate of pay for all hour worked in excess of eight hours in any calendar day or in excess of forty hours in such workweek, as the case may be.
- (b) Subcontractor. The Contractor shall insert in any subcontracts and clauses set forth in paragraph (a) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

11. Tax Exempt Status (Sales Tax):

- A. The City of Kingston, hereinafter referred to as the Owner, is exempt from payment of sales and compensating use taxes of the State of New York and of cities and counties on all supplies and materials sold to the Owner pursuant to this Contract. This exemption does not, however, apply to tools, machinery, equipment or other properly leased by or to the Contractor and his sub-contractors shall be responsible for any and all applicable taxes, on such leased tools, machinery, equipment, other property or such incorporated supplies and materials and the provisions set forth below will not be applicable to such tools, machinery, equipment, property, supplies and materials.

- B. The purchase by the Contractor of the supplies and materials sold hereunder will be a purchase or procurement for resale and therefore not subject to the New York State Sale or Compensating Use Taxes for any such taxes of cities and counties. The sale of such supplies and materials by the Contractor to the Owner, which is a government agency, will not be subject to aforesaid sales or compensating use taxes. With respect to such supplies and materials sold hereunder, the Contractor, at the request of the Owner, shall furnish to the Owner such bills of sale and other instruments as may be required by it, properly executed, acknowledged and delivered, assuring to it title to such supplies and materials free of encumbrances and the Contractor shall mark or otherwise identify all such supplies and materials as the property of the Owner.
- C. The purchase by sub-contractor of supplies and materials to be sold hereunder will also be a purchase or procurement for resale to the Contractor (either directly or through other sub-contractors) and therefore not subject to the aforesaid sales or compensating use taxes, provided that the sub-contractor agreements provide for the resale of such supplies and materials prior to and separate and apart from the incorporation of such supplies and materials into the permanent construction and that such subcontract agreements are in a form similar to this Contract with respect to the separation of the sale of supplies and materials from the work and labor to be provided.
- D. If as a result of such sales of supplies and materials (1) any claim is made against the Contractor by the State of New York or any City or County for sales and compensating use taxes on the aforementioned supplies and materials, or (2) any claim is made against the Contractor by a materialman or subcontractor by the State of New York or any City or County for Sales or Compensating Use Taxes on the aforesaid supplies and materials, then if the Contractor and subcontractors have complied with the provisions of the Contract relating thereto, the Owner will reimburse the Contractor for an amount equal to the amount of such tax required to be paid in accordance with the requirements of law, provided that:
1. The subcontract agreements in connection with this Contract provide for the resale of such supplies and materials prior to and separate and apart from the incorporation of such supplies and materials into the permanent construction; such subcontract agreements are in a form similar to this Contract with respect to the separation of the sales of supplies and materials from the other work and labor to be provided; and such separation is actually followed in practice, including the separation of payments for supplies and materials from the payment for other work and labor.
 2. The Contractor and his subcontractors and materialmen obtain any and all necessary resale exemption certification from the appropriate governmental agency or agencies and furnish a resale certificate to all persons, firms or corporations from which they purchase supplies and materials for the performance of the work covered by this Contract.

3. The Contractor and all subcontractors maintain and keep for a period of six (6) years after the date of final payment for the sale, or if a claim for sales or compensating use tax is pending or threatened, at the end of such six (6) year period, until such claim is finally settled, records which in the judgment of the Department of Taxation and Finance adequately show (1) all materials and supplies purchased by them for resale pursuant to the provisions of this Contract and (2) all materials and supplies sold to the Owner pursuant to the provisions of this Contract.
 4. The Owner is afforded the opportunity, before any payment is made, to contest said claim in the manner and to the extent that the Owner may choose and to settle or satisfy said claim and such attorney as the Owner may designate is authorized to act for the purpose of contesting, settling and satisfying said claim and;
 5. The Contractor and the sub-contractor give immediate notice to the Owner of any such claim, cooperate with the Owner and it's designated attorney in contesting said claim and furnish promptly to the Owner and said attorney all information and documents to be preserved for six (6) years after the date of final payment for the sale or, of such a claim pending or threatened at end of such six (6) years, until such claim is finally settled. If the Owner elects to contest any such claim, it will bear the expense of such contest.
 6. Nothing in this Section is intended or shall be construed as relieving the Contractor from his obligations under the General Conditions or any other provisions of the Contract, and the Contractor shall have the full continuing responsibility to install the materials and supplies purchased in accordance with the provisions of this Contract, to protect the same, to maintain them in proper condition and to forthwith repair, replace and make good any damage thereto without cost to the Owner until such time as the work covered by the Contract is fully accepted by the Owner.
12. Compliance With Section 103-A of the General Municipal Law:
- A. Section 103-A of the General Municipal Law has been adopted and required the following on all Contracts and also all Specifications and is self-explanatory.
- "The vendor hereby agrees to the provisions of Section 103-A of the General Municipal Law" which required that upon the refusal of a person, when called before a grand jury to testify concerning any transaction or contract had with the State, any political sub-division thereof, a public authority to sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant question concerning such transaction or contract,
- (a) such person, any firm, partnership or corporation of which he is a member,

partner, director or officer shall be disqualified from thereafter selling to or submitting bids to or receiving award from or entering into any contracts with any municipal corporation or any public department, agency or official thereof, for goods, work or services for a period of five years, after such refusal and,

- (b) any and all Contracts made with any Municipal Corporation or any public department, agency or official thereof, since the effective date of the law, by such persons, or by any firm, partnership or corporation of which he is a member, partner, director or officer may be cancelled or terminated by the municipal corporation without incurring any penalty for or damages on account of such cancellation or termination, but any monies owing by the municipal corporation for goods delivered or work done prior to the cancellation or termination shall be paid.

"The vendor does hereby certify that he or it is under no such impediment or disqualification from bidding created under Section 103-B of the General Municipal Law of the State of New York."

13. Time of Completion and Liquidated Damages

Add to Section 15, Time of Completion & Liquidated Damages, Page GC-9.

All work shall be completed in 90 consecutive calendar days from the date set forth in the Notice to Proceed.

The date of completion shall be the date when the work has been substantially completed to such an extent that the Owner can utilize the sites without inconvenience.

Minor items which are not completed but which do not interfere with the daily use of the sites by the owner will not be deemed as a failure to comply with the requirements of the time of completion of the work.

Liquidated damages may be assessed for each and every calendar day that the work is not in substantial completion, after the above stated time for total completion of the work at the rate of Five Hundred Dollars and 00/100 (\$500.00) per day.

14. Taxes:

- A. Any tax imposed by any present or future law of Federal Government, any State or any subdivision thereof, or any local government on any materials, articles, or services required

to be furnished shall be paid by the Contractor without recourse against or reimbursement thereof from Owner.

- B. Pay all payroll taxes or contributions, unemployment insurance or other similar taxes as are now or hereafter in effect.
 - C. Above requirements exclude taxes and assessments on real property comprising site of project.
15. Wages:
- A. In accordance with requirements of Section 220 of New York State Labor Law, Industrial Commissioner of Department of Labor has ascertained prevailing rates of wages which shall apply to this Project.
 - B. Where rates are not enumerated in following rate schedule in such cases, current wage rates shall apply.
 - C. Prevailing rates of wages, which are minimum hourly rates, shall be paid as follows:

Andrew M. Cuomo, Governor



Peter M. Rivera, Commissioner

CITY OF KINGSTON

RICHARD RUTH, III, P.E., SR. PROJECT ENGINEER
BRINNIER AND LARIOS, P.C.
67 MAIDEN LANE
KINGSTON NY 12401

Schedule Year 2012 through 2013
Date Requested 09/07/2011
PRC# 2011007706

Location WASTEWATER TREATMENT FACILITY
Project ID# CK-111
Project Type STREETScape SCREEN AT THE KINGSTON WASTEWATER TREATMENT FACILITY

PREVAILING WAGE SCHEDULE FOR ARTICLE 8 PUBLIC WORK PROJECT

Attached is the current schedule(s) of the prevailing wage rates and prevailing hourly supplements for the project referenced above. A unique Prevailing Wage Case Number (PRC#) has been assigned to the schedule(s) for your project.

The schedule is effective from July 2012 through June 2013. All updates, corrections, posted on the 1st business day of each month, and future copies of the annual determination are available on the Department's website www.labor.state.ny.us. Updated PDF copies of your schedule can be accessed by entering your assigned PRC# at the proper location on the website.

It is the responsibility of the contracting agency or its agent to annex and make part, the attached schedule, to the specifications for this project, when it is advertised for bids and /or to forward said schedules to the successful bidder(s), immediately upon receipt, in order to insure the proper payment of wages.

Please refer to the "General Provisions of Laws Covering Workers on Public Work Contracts" provided with this schedule, for the specific details relating to other responsibilities of the Department of Jurisdiction.

Upon completion or cancellation of this project, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

NOTICE OF COMPLETION / CANCELLATION OF PROJECT

Date Completed: _____ Date Cancelled: _____

Name & Title of Representative: _____

Phone: (518) 457-5589 Fax: (518) 485-1870
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240

General Provisions of Laws Covering Workers on Article 8 Public Work Contracts

Introduction

The Labor Law requires public work contractors and subcontractors to pay laborers, workers, or mechanics employed in the performance of a public work contract not less than the prevailing rate of wage and supplements (fringe benefits) in the locality where the work is performed.

Responsibilities of the Department of Jurisdiction

A Department of Jurisdiction (Contracting Agency) includes a state department, agency, board or commission; a county, city, town or village; a school district, board of education or board of cooperative educational services; a sewer, water, fire, improvement and other district corporation; a public benefit corporation; and a public authority awarding a public work contract.

The Department of Jurisdiction (Contracting Agency) awarding a public work contract **MUST** obtain a Prevailing Rate Schedule listing the hourly rates of wages and supplements due the workers to be employed on a public work project. This schedule may be obtained by completing and forwarding a "Request for wage and Supplement Information" form (PW 39) to the Bureau of Public Work. The Prevailing Rate Schedule **MUST** be included in the specifications for the contract to be awarded and is deemed part of the public work contract.

Upon the awarding of the contract, the law requires that the Department of Jurisdiction (Contracting Agency) furnish the following information to the Bureau: the name and address of the contractor, the date the contract was let and the approximate dollar value of the contract. To facilitate compliance with this provision of the Labor Law, a copy of the Department's "Notice of Contract Award" form (PW 16) is provided with the original Prevailing Rate Schedule.

The Department of Jurisdiction (Contracting Agency) is required to notify the Bureau of the completion or cancellation of any public work project. The Department's PW 200 form is provided for that purpose.

Both the PW 16 and PW 200 forms are available for completion online.

Hours

No laborer, worker, or mechanic in the employ of a contractor or subcontractor engaged in the performance of any public work project shall be permitted to work more than eight hours in any day or more than five days in any week, except in cases of extraordinary emergency. The contractor and the Department of Jurisdiction (Contracting Agency) may apply to the Bureau of Public Work for a dispensation permitting workers to work additional hours or days per week on a particular public work project.

There are very few exceptions to this rule. Complete information regarding these exceptions is available on the "4 Day / 10 Hour Work Schedule" form (PW 30R).

Wages and Supplements

The wages and supplements to be paid and/or provided to laborers, workers, and mechanics employed on a public work project shall be not less than those listed in the current Prevailing Rate Schedule for the locality where the work is performed. If a prime contractor on a public work project has not been provided with a Prevailing Rate Schedule, the contractor must notify the Department of Jurisdiction (Contracting Agency) who in turn must request an original Prevailing Rate Schedule form the Bureau of Public Work. Requests may be submitted by: mail to NYSDOL, Bureau of Public Work, State Office Bldg. Campus, Bldg. 12, Rm. 130, Albany, NY 12240; Fax to Bureau of Public Work (518) 485-1870; or electronically at the NYSDOL website www.labor.state.ny.us.

Upon receiving the original schedule, the Department of Jurisdiction (Contracting Agency) is **REQUIRED** to provide complete copies to all prime contractors who in turn **MUST**, by law, provide copies of all applicable county schedules to each subcontractor and obtain from each subcontractor, an affidavit certifying such schedules were received. If the original schedule expired, the contractor may obtain a copy of the new annual determination from the NYSDOL website www.labor.state.ny.us.

The Commissioner of Labor makes an annual determination of the prevailing rates. This determination is in effect from July 1st through June 30th of the following year. The annual determination is available on the NYSDOL website www.labor.state.ny.us.

Payrolls and Payroll Records

Every contractor and subcontractor **MUST** keep original payrolls or transcripts subscribed and affirmed as true under penalty of perjury. Payrolls must be maintained for at least three (3) years from the project's date of completion. At a minimum, payrolls must show the following information for each person employed on a public work project: Name, Address, Last 4 Digits of Social Security Number, Classification(s) in which the worker was employed, Hourly wage rate(s) paid, Supplements paid or provided, and Daily and weekly number of hours worked in each classification.

Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury. The Department of Jurisdiction (Contracting Agency) shall collect, review for facial validity, and maintain such payrolls.

In addition, the Commissioner of Labor may require contractors to furnish, with ten (10) days of a request, payroll records sworn to as their validity and accuracy for public work and private work. Payroll records include, by are not limited to time cards, work description sheets, proof that supplements were provided, cancelled payroll checks and payrolls. Failure to provide the requested information within the allotted ten (10) days will result in the withholding of up to 25% of the contract, not to exceed \$100,000.00. If the contractor or subcontractor does not maintain a place of business in New York State and the amount of the contract exceeds \$25,000.00, payroll records and certifications must be kept on the project worksite.

The prime contractor is responsible for any underpayments of prevailing wages or supplements by any subcontractor.

All contractors or their subcontractors shall provide to their subcontractors a copy of the Prevailing Rate Schedule specified in the public work contract as well as any subsequently issued schedules. A failure to provide these schedules by a contractor or subcontractor is a violation of Article 8, Section 220-a of the Labor Law.

All subcontractors engaged by a public work project contractor or its subcontractor, upon receipt of the original schedule and any subsequently issued schedules, shall provide to such contractor a verified statement attesting that the subcontractor has received the Prevailing Rate Schedule and will pay or provide the applicable rates of wages and supplements specified therein. (See NYS Labor Laws, Article 8 . Section 220-a).

Determination of Prevailing Wage and Supplement Rate Updates Applicable to All Counties

The wages and supplements contained in the annual determination become effective July 1st whether or not the new determination has been received by a given contractor. Care should be taken to review the rates for obvious errors. Any corrections should be brought to the Department's attention immediately. It is the responsibility of the public work contractor to use the proper rates. If there is a question on the proper classification to be used, please call the district office located nearest the project. Any errors in the annual determination will be corrected and posted to the NYSDOL website on the first business day of each month. Contractors are responsible for paying these updated rates as well, retroactive to July 1st.

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. To the extent possible, the Department posts rates in its possession that cover periods of time beyond the July 1st to June 30th time frame covered by a particular annual determination. Rates that extend beyond that instant time period are informational ONLY and may be updated in future annual determinations that actually cover the then appropriate July 1st to June 30th time period.

Withholding of Payments

When a complaint is filed with the Commissioner of Labor alleging the failure of a contractor or subcontractor to pay or provide the prevailing wages or supplements, or when the Commissioner of Labor believes that unpaid wages or supplements may be due, payments on the public work contract shall be withheld from the prime contractor in a sufficient amount to satisfy the alleged unpaid wages and supplements, including interest and civil penalty, pending a final determination.

When the Bureau of Public Work finds that a contractor or subcontractor on a public work project failed to pay or provide the requisite prevailing wages or supplements, the Bureau is authorized by Sections 220-b and 235.2 of the Labor Law to so notify the financial officer of the Department of Jurisdiction (Contracting Agency) that awarded the public work contract. Such officer MUST then withhold or cause to be withheld from any payment due the prime contractor on account of such contract the amount indicated by the Bureau as sufficient to satisfy the unpaid wages and supplements, including interest and any civil penalty that may be assessed by the Commissioner of Labor. The withholding continues until there is a final determination of the underpayment by the Commissioner of Labor or by the court in the event a legal proceeding is instituted for review of the determination of the Commissioner of Labor.

The Department of Jurisdiction (Contracting Agency) shall comply with this order of the Commissioner of Labor or of the court with respect to the release of the funds so withheld.

Summary of Notice Posting Requirements

The current Prevailing Rate Schedule must be posted in a prominent and accessible place on the site of the public work project. The prevailing wage schedule must be encased in, or constructed of, materials capable of withstanding adverse weather conditions and be titled "PREVAILING RATE OF WAGES" in letters no smaller than two (2) inches by two (2) inches.

The "Public Work Project" notice must be posted at the beginning of the performance of every public work contract, on each job site.

Every employer providing workers' compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers' Compensation Board in a conspicuous place on the jobsite.

Every employer subject to the NYS Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers, notices furnished by the State Division of Human Rights.

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the NYS Department of Labor.

Apprentices

Employees cannot be paid apprentice rates unless they are individually registered in a program registered with the NYS Commissioner of Labor. The allowable ratio of apprentices to journeyworkers in any craft classification can be no greater than the statewide building trade ratios promulgated by the Department of Labor and included with the Prevailing Rate Schedule. An employee listed on a payroll as an apprentice who is not registered as above or is performing work outside the classification of work for which the apprentice is indentured, must be paid the prevailing journeyworker's wage rate for the classification of work the employee is actually performing.

NYSDOL Labor Law, Article 8, Section 220-3, require that only apprentices individually registered with the NYS Department of Labor may be paid apprenticeship rates on a public work project. No other Federal or State Agency of office registers apprentices in New York State.

Persons wishing to verify the apprentice registration of any person must do so in writing by mail, to the NYSDOL Office of Employability Development / Apprenticeship Training, State Office Bldg. Campus, Bldg. 12, Albany, NY 12240 or by Fax to NYSDOL Apprenticeship Training (518) 457-7154. All requests for verification must include the name and social security number of the person for whom the information is requested.

The only conclusive proof of individual apprentice registration is written verification from the NYSDOL Apprenticeship Training Albany Central office. Neither Federal nor State Apprenticeship Training offices outside of Albany can provide conclusive registration information.

It should be noted that the existence of a registered apprenticeship program is not conclusive proof that any person is registered in that program. Furthermore, the existence or possession of wallet cards, identification cards, or copies of state forms is not conclusive proof of the registration of any person as an apprentice.

Interest and Penalties

In the event that an underpayment of wages and/or supplements is found:

- Interest shall be assessed at the rate then in effect as prescribed by the Superintendent of Banks pursuant to section 14-a of the Banking Law, per annum from the date of underpayment to the date restitution is made.
- A Civil Penalty may also be assessed, not to exceed 25% of the total of wages, supplements, and interest due.

Debarment

Any contractor or subcontractor and/or its successor shall be ineligible to submit a bid on or be awarded any public work contract or subcontract with any state, municipal corporation or public body for a period of five (5) years when:

- Two (2) willful determinations have been rendered against that contractor or subcontractor and/or its successor within any consecutive six (6) year period.
- There is any willful determination that involves the falsification of payroll records or the kickback of wages or supplements.

Criminal Sanctions

Willful violations of the Prevailing Wage Law (Article 8 of the Labor Law) may be a felony punishable by fine or imprisonment of up to 15 years, or both.

Discrimination

No employee or applicant for employment may be discriminated against on account of age, race, creed, color, national origin, sex, disability or marital status.

No contractor, subcontractor nor any person acting on its behalf, shall by reason of race, creed, color, disability, sex or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates (NYS Labor Law, Article 8, Section 220-e(a)).

No contractor, subcontractor, nor any person acting on its behalf, shall in any manner, discriminate against or intimidate any employee on account of race, creed, color, disability, sex, or national origin (NYS Labor Law, Article 8, Section 220-e(b)).

The Human Rights Law also prohibits discrimination in employment because of age, marital status, or religion.

There may be deducted from the amount payable to the contractor under the contract a penalty of \$50.00 for each calendar day during which such person was discriminated against or intimidated in violation of the provision of the contract (NYS Labor Law, Article 8, Section 220-e(c)).

The contract may be cancelled or terminated by the State or municipality. All monies due or to become due thereunder may be forfeited for a second or any subsequent violation of the terms or conditions of the anti-discrimination sections of the contract (NYS Labor Law, Article 8, Section 220-e(d)).

Every employer subject to the New York State Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers notices furnished by the State Division of Human Rights.

Workers' Compensation

In accordance with Section 142 of the State Finance Law, the contractor shall maintain coverage during the life of the contract for the benefit of such employees as required by the provisions of the New York State Workers' Compensation Law.

A contractor who is awarded a public work contract must provide proof of workers' compensation coverage prior to being allowed to begin work.

The insurance policy must be issued by a company authorized to provide workers' compensation coverage in New York State. Proof of coverage must be on form C-105.2 (Certificate of Workers' Compensation Insurance) and must name this agency as a certificate holder.

If New York State coverage is added to an existing out-of-state policy, it can only be added to a policy from a company authorized to write workers' compensation coverage in this state. The coverage must be listed under item 3A of the information page.

The contractor must maintain proof that subcontractors doing work covered under this contract secured and maintained a workers' compensation policy for all employees working in New York State.

Every employer providing worker's compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers' Compensation Board in a conspicuous place on the jobsite.

Unemployment Insurance

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the New York State Department of Labor.



Andrew M. Cuomo, Governor

Peter M. Rivera, Commissioner

CITY OF KINGSTON

RICHARD RUTH, III, P.E., SR. PROJECT ENGINEER
BRINNIE AND LARIOS, P.C.
67 MAIDEN LANE
KINGSTON NY 12401

Schedule Year 2012 through 2013
Date Requested 09/07/2011
PRC# 2011007706

Location WASTEWATER TREATMENT FACILITY
Project ID# CK-111
Project Type STREETScape SCREEN AT THE KINGSTON WASTEWATER TREATMENT FACILITY

Notice of Contract Award

New York State Labor Law, Article 8, Section 220.3a requires that certain information regarding the awarding of public work contracts, be furnished to the Commissioner of Labor. One "Notice of Contract Award" (PW 16, which may be photocopied), **MUST** be completed for **EACH** prime contractor on the above referenced project.

Upon notifying the successful bidder(s) of this contract, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

Contractor Information

All information must be supplied

Federal Employer Identification Number: _____		
Name: _____		
Address: _____ _____		
City: _____	State: _____	Zip: _____
Amount of Contract: \$ _____	Contract Type:	
Approximate Starting Date: ____/____/____	<input type="checkbox"/> (01) General Construction	
Approximate Completion Date: ____/____/____	<input type="checkbox"/> (02) Heating/Ventilation	
	<input type="checkbox"/> (03) Electrical	
	<input type="checkbox"/> (04) Plumbing	
	<input type="checkbox"/> (05) Other : _____	

Phone: (518) 457-5589 Fax: (518) 485-1870
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240

IMPORTANT NOTICE

FOR

CONTRACTORS & CONTRACTING AGENCIES

Social Security Numbers on Certified Payrolls

The Department of Labor is cognizant of the concerns of the potential for misuse or inadvertent disclosure of social security numbers. Identity theft is a growing problem and we are sympathetic to contractors' concerns with regard to inclusion of this information on payrolls if another identifier will suffice.

For these reasons, *the substitution of the use of the last four digits of the social security number on certified payrolls submitted to contracting agencies on public work projects is now acceptable to the Department of Labor.*

NOTE: This change does not affect the Department's ability to request and receive the entire social security number from employers during the course of its public work / prevailing wage investigations.

**To all State Departments, Agency Heads and Public Benefit Corporations
IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND**

Budget Policy & Reporting Manual

B-610

Public Work Enforcement Fund

effective date December 7, 2005

1. Purpose and Scope:

This Item describes the Public Work Enforcement Fund (the Fund, PWEF) and its relevance to State agencies and public benefit corporations engaged in construction or reconstruction contracts, maintenance and repair, and announces the recently-enacted increase to the percentage of the dollar value of such contracts that must be deposited into the Fund. This item also describes the roles of the following entities with respect to the Fund:

- New York State Department of Labor (DOL),
- The Office of the State of Comptroller (OSC), and
- State agencies and public benefit corporations.

2. Background and Statutory References:

DOL uses the Fund to enforce the State's Labor Law as it relates to contracts for construction or reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law. State agencies and public benefit corporations participating in such contracts are required to make payments to the Fund.

Chapter 511 of the Laws of 1995 (as amended by Chapter 513 of the Laws of 1997, Chapter 655 of the Laws of 1999, Chapter 376 of the Laws of 2003 and Chapter 407 of the Laws of 2005) established the Fund.

3. Procedures and Agency Responsibilities:

The Fund is supported by transfers and deposits based on the value of contracts for construction and reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law, into which all State agencies and public benefit corporations enter.

Chapter 407 of the Laws of 2005 increased the amount required to be provided to this fund to .10 of one-percent of the total cost of each such contract, to be calculated at the time agencies or public benefit corporations enter into a new contract or if a contract is amended. The provisions of this bill became effective August 2, 2005.

To all State Departments, Agency Heads and Public Benefit Corporations
IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND

OSC will report to DOL on all construction-related ("D") contracts approved during the month, including contract amendments, and then DOL will bill agencies the appropriate assessment monthly. An agency may then make a determination if any of the billed contracts are exempt and so note on the bill submitted back to DOL. For any instance where an agency is unsure if a contract is or is not exempt, they can call the Bureau of Public Work at the number noted below for a determination. Payment by check or journal voucher is due to DOL within thirty days from the date of the billing. DOL will verify the amounts and forward them to OSC for processing.

For those contracts which are not approved or administered by the Comptroller, monthly reports and payments for deposit into the Public Work Enforcement Fund must be provided to the Administrative Finance Bureau at the DOL within 30 days of the end of each month or on a payment schedule mutually agreed upon with DOL.

Reports should contain the following information:

- Name and billing address of State agency or public benefit corporation;
- State agency or public benefit corporation contact and phone number;
- Name and address of contractor receiving the award;
- Contract number and effective dates;
- Contract amount and PWEF assessment charge (if contract amount has been amended, reflect increase or decrease to original contract and the adjustment in the PWEF charge); and
- Brief description of the work to be performed under each contract.

Checks and Journal Vouchers, payable to the "New York State Department of Labor" should be sent to:

Department of Labor
Administrative Finance Bureau-PWEF Unit
Building 12, Room 464
State Office Campus
Albany, NY 12240

Any questions regarding billing should be directed to NYSDOL's Administrative Finance Bureau-PWEF Unit at (518) 457-3624 and any questions regarding Public Work Contracts should be directed to the Bureau of Public Work at (518) 457-5589.

Construction Industry Fair Play Act

Required Posting For Labor Law Article 25-B § 861-d

Construction industry employers must post the "Construction Industry Fair Play Act" notice in a prominent and accessible place on the job site.

Failure to post the notice can result in penalties of up to \$1,500 for a first offense and up to \$5,000 for a second offense.

The posting is included as part of this wage schedule. Additional copies may be obtained from the NYS DOL website, www.labor.ny.gov.

If you have any questions concerning the Fair Play Act, please call the State Labor Department toll-free at 1-866-435-1499 or email us at: dol.misclassified@labor.state.ny.us.



New York State Department of Labor
Required Notice under Article 25-B of the Labor Law

**ATTENTION ALL EMPLOYEES, CONTRACTORS AND SUBCONTRACTORS:
YOU ARE COVERED BY THE
CONSTRUCTION INDUSTRY FAIR PLAY ACT**

The law says that you are an employee unless:

- You are free from direction and control in performing your job AND
 - You perform work that is not part of the usual work done by the business that hired you AND
 - You have an independently established business
- Your employer cannot consider you to be an independent contractor unless all three of these facts apply to your work.

**IT IS AGAINST THE LAW FOR AN EMPLOYER TO MISCLASSIFY EMPLOYEES AS
INDEPENDENT CONTRACTORS OR PAY EMPLOYEES OFF-THE-BOOKS.**

Employee rights. If you are an employee:

- You are entitled to state and federal worker protections such as
 - unemployment benefits, if unemployed through no fault of your own, able to work, and otherwise qualified
 - workers' compensation benefits for on-the-job injuries
 - payment for wages earned, minimum wage, and overtime (under certain conditions)
 - prevailing wages on public work projects
 - the provisions of the National Labor Relations Act and
 - a safe work environment
- It is a violation of this law for employers to retaliate against anyone who asserts their rights under the law. Retaliation subjects an employer to civil penalties, a private lawsuit or both.

Independent Contractors: If you are an independent contractor:

- You must pay all taxes required by New York State and Federal Law.

Penalties for paying off-the-books or improperly treating employees as independent contractors:

- **Civil Penalty** First Offense: up to \$2,500 per employee.
Subsequent Offense(s): up to \$5,000 per employee.
- **Criminal Penalty** First Offense: Misdemeanor - up to 30 days in jail, up to a \$25,000 fine and debarment from performing Public Work for up to one year.
Subsequent Offense(s): Misdemeanor - up to 60 days in jail, up to a \$50,000 fine and debarment from performing Public Work for up to 5 years.

If you have questions about your employment status or believe that your employer may have violated your rights and you want to file a complaint, call the Department of Labor at 1(866)435-1499 or send an email to dol.misclassified@labor.state.ny.us. All complaints of fraud and violations are taken seriously and you can remain anonymous.

Employer Name:

WORKER NOTIFICATION

(Labor Law §220, paragraph a of subdivision 3-a)

Effective February 24, 2008

This provision is an addition to the existing prevailing wage rate law, Labor Law §220, paragraph a of subdivision 3-a. It requires contractors and subcontractors to provide written notice to all laborers, workers or mechanics of the *prevailing wage rate* for their particular job classification *on each pay stub**. It also requires contractors and subcontractors to *post a notice* at the beginning of the performance of every public work contract *on each job site* that includes the telephone number and address for the Department of Labor and a statement informing laborers, workers or mechanics of their right to contact the Department of Labor if he/she is not receiving the proper prevailing rate of wages and/or supplements for his/her particular job classification. The required notification will be provided with each wage schedule, may be downloaded from our website www.labor.state.ny.us or made available upon request by contacting the Bureau of Public Work at 518-457-5589.

* In the event that the required information will not fit on the pay stub, an accompanying sheet or attachment of the information will suffice.



New York State Department of Labor
Bureau of Public Work

Attention Employees

THIS IS A: **PUBLIC WORK PROJECT**

If you are employed on this project as a **worker, laborer, or mechanic** you are entitled to receive the **prevailing wage and supplements rate** for the classification at which you are working.

Chapter 629 of
the Labor Laws
of 2007:

**These wages are set by law and must be posted
at the work site. They can also be found at:
www.labor.ny.gov**

If you feel that you have not received proper wages or benefits,
please call our nearest office.*

Albany	(518) 457-2744	Patchogue	(631) 687-4882
Binghamton	(607) 721-8005	Rochester	(585) 258-4505
Buffalo	(716) 847-7159	Syracuse	(315) 428-4056
Garden City	(516) 228-3915	Utica	(315) 793-2314
New York City	(212) 775-3568	White Plains	(914) 997-9507
Newburgh	(845) 568-5287		

* For New York City government agency construction projects, please
contact the Office of the NYC Comptroller at (212) 669-4443, or
www.comptroller.nyc.gov – click on Bureau of Labor Law.

Contractor Name: _____

Project Location: _____

OSHA 10-hour Construction Safety and Health Course – S1537-A

Effective July 18, 2008

This provision is an addition to the existing prevailing wage rate law, Labor Law §220, section 220-h. It requires that on all public work projects of at least \$250,000.00, all laborers, workers and mechanics working on the site, be certified as having successfully completed the OSHA 10-hour construction safety and health course. It further requires that the advertised bids and contracts for every public work contract of at least \$250,000.00, contain a provision of this requirement.

NOTE: The OSHA 10 Legislation only applies to workers on a public work project that are required, under Article 8, to receive the prevailing wage.

Where to find OSHA 10-hour Construction Course

1. NYS Department of Labor website for scheduled outreach training at:

www.labor.state.ny.us/workerprotection/safetyhealth/DOSH_ONSITE_CONSULTATION.shtm

2. OSHA Training Institute Education Centers:

Rochester Institute of Technology OSHA Education Center

Rochester, NY

Donna Winter

Fax (585) 475-6292

e-mail: dlwtpo@rit.edu

(866) 385-7470 Ext. 2919

www.rit.edu/~outreach/course.php3?CourseID=54

Atlantic OSHA Training Center

UMDNJ – School of Public Health

Piscataway, NJ

Janet Crooks

Fax (732) 235-9460

e-mail: crooksje@umdnj.edu

(732) 235-9455

<https://ophp.umdj.edu/wconnect/ShowSchedule.awp?~GROUP~AOTCON~10~>

Atlantic OSHA Training Center

University at Buffalo

Buffalo, New York

Joe Syracuse

Fax (716) 829-2806

e-mail: japs@buffalo.edu

(716) 829-2125

http://www.smbs.buffalo.edu/CENTERS/trc/schedule_OSHA.php

Keene State College

Manchester, NH

Leslie Singleton

e-mail: lsingleton@keene.edu

(800) 449-6742

www.keene.edu/courses/print/courses_oshacfm

3. List of trainers and training schedules for OSHA outreach training at:

www.OutreachTrainers.org

Requirements for OSHA 10 Compliance

Chapter 282 of the Laws of 2007, codified as Labor Law 220-h took effect on July 18, 2008. The statute provides as follows:

The advertised specifications for every contract for public work of \$250,000.00 or more must contain a provision requiring that every worker employed in the performance of a public work contract shall be certified as having completed an OSHA 10 safety training course. The clear intent of this provision is to require that all employees of public work contractors, required to be paid prevailing rates, receive such training “prior to the performing any work on the project.”

The Bureau will enforce the statute as follows:

All contractors and sub contractors must attach a copy of proof of completion of the OSHA 10 course to the first certified payroll submitted to the contracting agency and on each succeeding payroll where any new or additional employee is first listed.

Proof of completion may include but is not limited to:

- Copies of bona fide course completion card (*Note: Completion cards do not have an expiration date.*)
- Training roster, attendance record of other documentation from the certified trainer pending the issuance of the card.
- Other valid proof

******A certification by the employer attesting that all employees have completed such a course is not sufficient proof that the course has been completed.

Any questions regarding this statute may be directed to the New York State Department of Labor, Bureau of Public Work at 518-485-5696.

WICKS Reform 2008

(For all contracts advertised or solicited for bid on or after 7/1/08)

- Raises the threshold for public work projects subject to the Wicks Law requiring separate specifications and bidding for the plumbing, heating and electrical work. The total project's threshold would increase from \$50,000 to: \$3 million in Bronx, Kings, New York, Queens and Richmond counties; \$1.5 million in Nassau, Suffolk and Westchester counties; and \$500,000 in all other counties.
- For projects below the monetary threshold, bidders must submit a sealed list naming each subcontractor for the plumbing, HVAC and electrical work and the amount to be paid to each. The list may not be changed unless the public owner finds a legitimate construction need, including a change in specifications or costs or use of a Project Labor Agreement (PLA), and must be open to public inspection.
- Allows the state and local agencies and authorities to waive the Wicks Law and use a PLA if it will provide the best work at the lowest possible price. If a PLA is used, all contractors shall participate in apprentice training programs in the trades of work it employs that have been approved by the Department of Labor (DOL) for not less than three years. They shall also have at least one graduate in the last three years and use affirmative efforts to retain minority apprentices. PLA's would be exempt from Wicks, but deemed to be public work subject to prevailing wage enforcement.
- The Commissioner of Labor shall have the power to enforce separate specification requirements on projects, and may issue stop-bid orders against public owners for non-compliance.
- Other new monetary thresholds, and similar sealed bidding for non-Wicks projects, would apply to certain public authorities including municipal housing authorities, NYC Construction Fund, Yonkers Educational Construction Fund, NYC Municipal Water Finance Authority, Buffalo Municipal Water Finance Authority, Westchester County Health Care Association, Nassau County Health Care Corp., Clifton-Fine Health Care Corp., Erie County Medical Center Corp., NYC Solid Waste Management Facilities, and the Dormitory Authority.
- Reduces from 15 to 7 days the period in which contractors must pay subcontractors.

IMPORTANT INFORMATION

Regarding Use of Form PW30R

"Employer Registration for Use of 4 Day / 10 Hour Work Schedule"

To use the '4 Day / 10 Hour Work Schedule':

There **MUST** be a *Dispensation of Hours (PW30)* in place on the project

AND

You **MUST** register your intent to work 4 / 10 hour days, by completing the PW30R Form.

REMEMBER...

The '4 Day / 10 Hour Work Schedule' applies **ONLY** to Job Classifications and Counties listed on the PW30R Form.

Do not write in any additional Classifications or Counties.

(Please note : For each Job Classification check the individual wage schedule for specific details regarding their 4/10 hour day posting.)

Instructions for Completing Form PW30R

“Employer Registration for Use of 4 Day / 10 Hour Work Schedule”

Before completing Form PW30R check to be sure ...

- There is a *Dispensation of Hours* in place on the project.
- The 4 Day / 10 Hour Work Schedule applies to the Job Classifications you will be using.
- The 4 Day / 10 Hour Work Schedule applies to the County / Counties where the work will take place.

Instructions (Type or Print legibly):

Contractor Information:

- Enter the Legal Name of the business, FEIN, Street Address, City, State, Zip Code; the Company's Phone and Fax numbers; and the Company's email address (if applicable)
- Enter the Name of a Contact Person for the Company along with their Phone and Fax numbers, and the personal email address (if applicable)

Project Information:

- Enter the Prevailing Rate Case number (PRC#) assigned to this project
- Enter the Project Name / Type (i.e. Smithtown CSD – Replacement of HS Roof)
- Enter the Exact Location of Project (i.e. Smithtown HS, 143 County Route #2, Smithtown, NY; Bldgs. 1 & 2)
- If you are a Subcontractor, enter the name of the Prime Contractor for which you work
- On the Checklist of Job Classifications -
 - Go to pages 2 and 3 of the form
 - Place a checkmark in the box to the right of the Job Classification you are choosing
 - Mark all Job Classifications that apply

Do not write in any additional Classifications or Counties.

Requestor Information:

- Enter the name of the person submitting the registration, their title with the company, and the date the registration is filled out

Return Completed Form:

- **Mail** the completed PW30R form (3 pages) to: NYSDOL Bureau of Public Work, SOBC – Bldg.12 – Rm.130, Albany, NY 12240 -**OR**-
- **Fax** the completed PW30R form (3 pages) to: NYSDOL Bureau of Public Work at (518)485-1870



New York State Department of Labor
Bureau of Public Work
W. Averell Harriman State Office Campus
Building 12 - Room 130
Albany, New York 12240
Phone - (518) 457-5589 Fax - (518) 485-1870

Employer Registration for Use of 4 Day / 10 Hour Work Schedule

Before completing Form PW30R check to be sure ...

There is a *Dispensation of Hours* in place on the project.

The 4 Day / 10 Hour Work Schedule applies to the Job Classifications you will be using.

The 4 Day / 10 Hour Work Schedule applies to the County / Counties where the work will take place.

Please Type or Print the Requested Information

When completed ...

Mail to NYSDOL Bureau of Public Work, SOBC, Bldg. 12, Rm.130, Albany, NY 12240

-or-

Fax to NYSDOL Bureau of Public Work at (518) 485-1870

Contractor Information

Company Name: _____ FEIN: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone Number _____ Fax Number: _____ Email Address: _____

Contact Person: _____

Phone No: _____ Fax No: _____ Email: _____

Project Information

Project PRC#: _____ Project Name/Type: _____

Exact Location
of Project: _____ County: _____

(If you are Subcontractor)

Prime Contractor Name: _____

Job Classification(s) to Work 4/10 Schedule: (Choose all that apply on Job Classification Checklist - Pages 2 & 3)

*** Do not write in any additional Classifications or Counties***

Requestor Information

Name: _____

Title: _____ Date : _____

Job Classification Checklist

(Place a checkmark by all classifications that will be using the 4/10 schedule)

*** Do not write in any additional Classifications or Counties***

Job Classification	Tag #	Applicable Counties	Check Box
Carpenter - Building	1042	Clinton, Essex, Franklin	<input type="checkbox"/>
Carpenter - Building	370	Albany, Fulton, Greene, Montgomery, Rensselaer, Schenectady, Schoharie	<input type="checkbox"/>
Carpenter - Building	370Z2	Hamilton, Warren, Washington	<input type="checkbox"/>
Carpenter - Building	370Z3	Saratoga	<input type="checkbox"/>
Carpenter - Heavy&Highway	370Saratoga	Saratoga	<input type="checkbox"/>
Carpenter - Heavy&Highway	370/1042H/H	Clinton, Essex, Franklin, Hamilton	<input type="checkbox"/>
Carpenter - Heavy&Highway	370H/H	Albany, Fulton, Montgomery, Rensselaer, Schenectady, Schoharie, Warren, Washington	<input type="checkbox"/>
Carpenter - Building	85	Livingston, Monroe, Ontario, Wayne, Wyoming	<input type="checkbox"/>
Carpenter - Building	281B	Cayuga, Seneca, Yates	<input type="checkbox"/>
Carpenter - Heavy/Highway	281HH	Cayuga, Seneca, Yates	<input type="checkbox"/>
Carpenter - Building/Heavy&Highway	280	Genesee, Niagara, Orleans, Wyoming	<input type="checkbox"/>
Carpenter - Building/Heavy&Highway	9	Erie, Cattaraugus	<input type="checkbox"/>
Carpenter - Heavy&Highway	66h	Allegany, Chautauqua, Cattaraugus	<input type="checkbox"/>
Carpenter - Building	66	Allegany, Chautauqua, Cattaraugus	<input type="checkbox"/>
Carpenter - Building	277 CST	Cortland, Schuyler, Tompkins	<input type="checkbox"/>
Carpenter - Building	277 JLS	Jefferson, Lewis, St. Lawrence	<input type="checkbox"/>
Carpenter - Building	277 omh	Herkimer, Madison, Oneida	<input type="checkbox"/>
Carpenter - Building	277 On	Onondaga	<input type="checkbox"/>
Carpenter - Building	277 Os	Oswego	<input type="checkbox"/>
Carpenter - Heavy/Highway	277h CST	Cortland, Schuyler, Tompkins	<input type="checkbox"/>
Carpenter - Heavy/Highway	277h JLS	Jefferson, Lewis, St. Lawrence	<input type="checkbox"/>
Carpenter - Heavy/Highway	277h On	Onondaga	<input type="checkbox"/>
Carpenter - Building/Heavy&Highway	277CDO	Chenango, Delaware, Otsego	<input type="checkbox"/>
Carpenter - Heavy/Highway	277oneidah	Herkimer, Madison, Oneida	<input type="checkbox"/>
Carpenter - Heavy/Highway	277h Os	Oswego	<input type="checkbox"/>
Electrician	25m	Nassau, Suffolk	<input type="checkbox"/>
Electrician	43	Cayuga, Chenango, Cortland, Herkimer, Madison, Oneida, Onondaga, Oswego, Otsego, Tompkins, Wayne	<input type="checkbox"/>
Electrician	840Teledata and 840 Z1	Cayuga, Onondaga, Ontario, Seneca, Wayne, Yates	<input type="checkbox"/>

Job Classification Checklist

(Place a checkmark by all classifications that will be using the 4/10 schedule)

*** Do not write in any additional Classifications or Counties***

Job Classification	Tag #	Applicable Counties	Check Box
Electrician	86	Genesee, Livingston, Monroe, Ontario, Orleans, Wayne, Wyoming	<input type="checkbox"/>
Electrician	910	Clinton, Essex, Franklin, Jefferson, Lewis, St. Lawrence	<input type="checkbox"/>
Electrician Lineman	1049Line/Gas	Nassau, Suffolk	<input type="checkbox"/>
Electrician Lineman	1249a	Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates	<input type="checkbox"/>
Elevator Constructor	138	Columbia, Delaware, Dutchess, Greene, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester	<input type="checkbox"/>
Elevator Constructor	14	Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming	<input type="checkbox"/>
Elevator Constructor	27	Chemung, Livingston, Monroe, Ontario, Schuyler, Seneca, Steuben, Wayne, Yates	<input type="checkbox"/>
Elevator Constructor	35	Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Oneida, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington	<input type="checkbox"/>
Elevator Constructor	62.1	Broome, Cayuga, Chenango, Cortland, Delaware, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, St. Lawrence, Tioga, Tompkins	<input type="checkbox"/>
Glazier	660	Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming	<input type="checkbox"/>
Glazier	660r	<u>Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming</u>	<input type="checkbox"/>
Glazier	677.1	Jefferson, Lewis, Livingston, Monroe, Ontario, Seneca, St. Lawrence, Wayne, Yates	<input type="checkbox"/>
Glazier	667.Z-2	Cayuga, Cortland, Herkimer, Madison, Oneida, Onondaga, Oswego	<input type="checkbox"/>
Glazier	677z3	Broome, Chemung, Chenango, Delaware, Otsego, Schuyler, Steuben, Tioga, Tompkins	<input type="checkbox"/>
Glazier	667r.2	Cayuga, Cortland, Herkimer, Madison, Oneida, Onondaga, Oswego	<input type="checkbox"/>
Insulator - Heat & Frost	30-Syracuse	Broome, Cayuga, Chemung, Chenango, Cortland, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, Otsego, Schuyler, Seneca, St. Lawrence, Tioga, Tompkins	<input type="checkbox"/>

Job Classification Checklist

(Place a checkmark by all classifications that will be using the 4/10 schedule)

*** Do not write in any additional Classifications or Counties ***

Job Classification	Tag #	Applicable Counties	Check Box
Laborers - Residential Deconstruction, Demolition	601	Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Cortland, Delaware, Essex, Franklin, Genesee, Jefferson, Lewis, Livingston, Monroe, Onondaga, Ontario, Orleans, Oswego, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Wayne, Wyoming, Yates	<input type="checkbox"/>
Laborer - Building	621b	Allegany, Cattaraugus, Chautauqua	<input type="checkbox"/>
Laborer - Residential	621r	Allegany, Cattaraugus, Chautauqua	<input type="checkbox"/>
Mason - Building/Heavy&Highway	780	Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk	<input type="checkbox"/>
Operating Engineer - Heavy& Highway	832H	Allegany, Chemung, Genesee, Livingston, Monroe, Ontario, Schuyler, Steuben, Wayne, Yates	<input type="checkbox"/>
Operating Engineer - Heavy/Highway	137H/H	Putnam, Westchester	<input type="checkbox"/>
Painter	178 B	Broome, Chenango, Tioga	<input type="checkbox"/>
Painter	178 E	Chemung, Schuyler, Steuben	<input type="checkbox"/>
Painter	178 O	Delaware, Otsego	<input type="checkbox"/>
Painter	31	Cayuga, Herkimer, Lewis, Madison, Oneida, Onondaga, Ontario, Oswego, Seneca	<input type="checkbox"/>
Painter	38.O	Oswego	<input type="checkbox"/>
Painter	4-Buf,Nia,Olean	Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Livingston, Niagara, Orleans, Steuben, Wyoming	<input type="checkbox"/>
Painter	4-Jamestown	Cattaraugus, Chautauqua	<input type="checkbox"/>
Painter	150	Livingston, Monroe, Ontario, Wayne, Yates	<input type="checkbox"/>
Sheetmetal Worker	46	Livingston, Monroe, Ontario, Seneca, Wayne, Yates	<input type="checkbox"/>
Teamster - Heavy&Highway	294h/h	Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington	<input type="checkbox"/>
Teamster - Heavy&Highway	317a.hh	Allegany, Cayuga, Cortland, Seneca, Steuben, Tompkins, Wayne, Yates	<input type="checkbox"/>
Teamster - Heavy&Highway	693.H/H	Broome, Chenango, Delaware, Otsego, Tioga	<input type="checkbox"/>
Teamster - Building/Heavy&Highway	456	Putnam, Westchester	<input type="checkbox"/>

Introduction to the Prevailing Rate Schedule

Information About Prevailing Rate Schedule

This information is provided to assist you in the interpretation of particular requirements for each classification of worker contained in the attached Schedule of Prevailing Rates.

Classification

It is the duty of the Commissioner of Labor to make the proper classification of workers taking into account whether the work is heavy and highway, building, sewer and water, tunnel work, or residential, and to make a determination of wages and supplements to be paid or provided. It is the responsibility of the public work contractor to use the proper rate. If there is a question on the proper classification to be used, please call the district office located nearest the project. District office locations and phone numbers are listed below.

Prevailing Wage Schedules are issued separately for "General Construction Projects" and "Residential Construction Projects" on a county-by-county basis.

General Construction Rates apply to projects such as: Buildings, Heavy & Highway, and Tunnel and Water & Sewer rates.

Residential Construction Rates generally apply to construction, reconstruction, repair, alteration, or demolition of one family, two family, row housing, or rental type units intended for residential use.

Some rates listed in the Residential Construction Rate Schedule have a very limited applicability listed along with the rate. Rates for occupations or locations not shown on the residential schedule must be obtained from the General Construction Rate Schedule. Please contact the local Bureau of Public Work office before using Residential Rate Schedules, to ensure that the project meets the required criteria.

Paid Holidays

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

Overtime

At a minimum, all work performed on a public work project in excess of eight hours in any one day or more than five days in any workweek is overtime. However, the specific overtime requirements for each trade or occupation on a public work project may differ. Specific overtime requirements for each trade or occupation are contained in the prevailing rate schedules.

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays.

The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Supplemental Benefits

Particular attention should be given to the supplemental benefit requirements. Although in most cases the payment or provision of supplements is for each hour worked, some classifications require the payment or provision of supplements for each hour paid (including paid holidays on which no work is performed) and/or may require supplements to be paid or provided at a premium rate for premium hours worked.

Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year. All contractors and subcontractors are required to pay the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the New York State Department of Labor website (www.labor.state.ny.us) for current wage rate information.

Apprentice Training Ratios

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1,1:3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.

Title (Trade)	Ratio
Boilermaker (Construction)	1:1,1:4
Boilermaker (Shop)	1:1,1:3
Carpenter (Bldg.,H&H, Pile Driver/Dockbuilder)	1:1,1:4
Carpenter (Residential)	1:1,1:3
Electrical (Outside) Lineman	1:1,1:2

Electrician (Inside)	1:1,1:3
Elevator/Escalator Construction & Modernizer	1:1,1:2
Glazier	1:1,1:3
Insulation & Asbestos Worker	1:1,1:3
Iron Worker	1:1,1:4
Laborer	1:1,1:3
Mason	1:1,1:4
Millwright	1:1,1:4
Op Engineer	1:1,1:5
Painter	1:1,1:3
Plumber & Steamfitter	1:1,1:3
Roofer	1:1,1:2
Sheet Metal Worker	1:1,1:3
Sprinkler Fitter	1:1,1:2

If you have any questions concerning the attached schedule or would like additional information, please contact the nearest BUREAU of PUBLIC WORK District Office or write to:

New York State Department of Labor
Bureau of Public Work
State Office Campus, Bldg. 12
Albany, NY 12240

District Office Locations:	Telephone #	FAX #
Bureau of Public Work - Albany	518-457-2744	518-485-0240
Bureau of Public Work - Binghamton	607-721-8005	607-721-8004
Bureau of Public Work - Buffalo	716-847-7159	716-847-7650
Bureau of Public Work - Garden City	516-228-3915	516-794-3518
Bureau of Public Work - Newburgh	845-568-5287	845-568-5332
Bureau of Public Work - New York City	212-775-3568	212-775-3579
Bureau of Public Work - Patchogue	631-687-4882	631-687-4904
Bureau of Public Work - Rochester	585-258-4505	585-258-4708
Bureau of Public Work - Syracuse	315-428-4056	315-428-4671
Bureau of Public Work - Utica	315-793-2314	315-793-2514
Bureau of Public Work - White Plains	914-997-9507	914-997-9523
Bureau of Public Work - Central Office	518-457-5589	518-485-1870

Ulster County General Construction

Asbestos Worker

04/01/2013

JOB DESCRIPTION Asbestos Worker

DISTRICT 9

ENTIRE COUNTIES

Columbia, Delaware, Dutchess, Greene, Orange, Putnam, Rockland, Sullivan, Ulster

WAGES

Per hour

7/01/2012

Asbestos Worker:

Removal & Hazardous

Abatement Only \$ 39.30

Only for the removal of insulation materials from mechanical systems which are not going to be scrapped.

SUPPLEMENTAL BENEFITS

Per hour paid

Journeyman

\$ 17.00

OVERTIME PAY

See (B, E, *Q, **T, V) on OVERTIME PAGE

HOLIDAY

Paid:

See (1) on HOLIDAY PAGE

Overtime:

See (2, 4, 6, 25) on HOLIDAY PAGE

* Code Q applies to 4,6,& 25.

** Code T applies to 2.

9-12a - Removal Only

Boilermaker

04/01/2013

JOB DESCRIPTION Boilermaker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour:

07/01/2012

Boilermaker

\$ 47.98

Repairs & Renovations

\$ 47.98

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2012

Boilermaker

33% of hourly

Repairs & Renovations

Wage Paid

+ \$22.25

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.

Repairs & Renovation Includes replacement of parts and repairs & renovation of existing unit.

OVERTIME PAY

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (8, 16, 23, 24) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 12, 15, 25) on HOLIDAY PAGE

NOTE: *Employee must work in pay week to receive Holiday Pay.

**Boilermaker gets 4 times the hourly wage rate for working on Labor Day.

***Repairs & Renovation see (B,E,Q) on HOLIDAY PAGE

HOLIDAY

REGISTERED APPRENTICES

*REGISTERED APPRENTICES

(1/2) Year Terms at the following percentage of Boilermaker's Wage

1st	2nd	3rd	4th	5th	6th	7th	8th
65%	65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits Per Hour:

Apprentice(s)	07/01/2012
	33% of Hourly Wage Paid plus amount below

1st	2nd	3rd	4th	5th	6th	7th	8th
\$17.41	\$18.10	\$18.79	\$19.48	\$20.17	\$20.86	\$21.55	\$22.25

NOTE: "Hourly Wage Paid" shall include any and all premium(s)

4-5

Carpenter - Building / Heavy&Highway

04/01/2013

JOB DESCRIPTION Carpenter - Building / Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Wages per hour:

	07/01/2012	07/01/2013	07/01/2014
		An Additional	An Additional
Carpenter - ONLY for Artificial Turf/Synthetic Sport Surface Installer	\$ 27.21	\$ 0.80*	\$ 0.73*

Note - Does not include the operation of equipment. Please see Operating Engineers rates.

(*)To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour Paid:

	07/01/2012
Journeyman	\$ 18.09

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid:	See (2, 17) on HOLIDAY PAGE
Overtime:	See (5, 6, 16) on HOLIDAY PAGE
Notes:	

When a holiday falls upon a Saturday, it shall be observed on the preceding Friday. When a holiday falls upon a Sunday, it shall be observed on the following Monday.

An employee taking an unexcused day off the regularly scheduled day before or after a paid Holiday shall not receive Holiday pay.

REGISTERED APPRENTICES

Wages per hour:

One year terms at the following percentage of Journeyman's wage:

1st	2nd	3rd	4th
50%	60%	70%	80%

Supplemental Benefits per hour paid:

07/01/2012

Carpenter	
1st year term	\$ 9.09
2nd year term	14.49
3rd year term	15.39
4th year term	16.29

1-42AtSS

Carpenter - Building / Heavy&Highway

04/01/2013

JOB DESCRIPTION Carpenter - Building / Heavy&Highway

DISTRICT 11

ENTIRE COUNTIES

Columbia, Dutchess, Orange, Sullivan, Ulster

WAGES

WAGES:(per hour)

	07/01/2012	07/01/2013 Additional
Carpenter	\$ 32.88	\$ 1.52**
Carpenter-Floor Coverer*	32.88	1.52**
Dockbuilder/Piledriver	32.88	1.52**
Diver Tender	32.88	1.52**
Diver(WET)	55.48	1.52**
Diver(DRY)	34.65	1.52**

** To be allocated at a later date

SHIFT DIFFERENTIAL: When mandated by a Government Agency irregular or off shift can be worked. The Carpenter shall receive an additional (15) percent of wage plus applicable benefits.

* Note: Rate DOES NOT apply in Orange or Dutchess County.

On projects for removal and/or abatement of asbestos or any toxic or hazardous material and it is required by the employer or mandated by NYS or Federal Regulation to wear protective equipment an additional two (2) hours pay per day including benefits on all classifications including apprentices. For work on smokestacks, silos, or steeples more than fifty (50) feet high, an additional \$2.00 per hour, payable from the ground up.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyworker \$ 22.71

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

BUILDING:

Paid: See (1) on HOLIDAY PAGE.

Overtime: See (5, 6) on HOLIDAY PAGE.

HEAVY/HIGHWAY:

Paid: See (5, 6, 16) on HOLIDAY PAGE including benefits.

Overtime: See (5, 6, 16) on HOLIDAY PAGE.

REGISTERED APPRENTICES

1 Year terms at the following percentage of journeymans wage.

1st	2nd	3rd	4th
50%	60%	70%	80%

Supplemental Benefits per hour paid:

Apprentices	
1st term	\$ 15.10
2nd term	15.10
3rd term	15.10
4th term	15.10

11-279.2B/H&H

Electrician

04/01/2013

JOB DESCRIPTION Electrician

DISTRICT 11

ENTIRE COUNTIES

Sullivan, Ulster

PARTIAL COUNTIES

Delaware: Only in the Townships of Andes, Harpersfield, Kortwright, Stamford, Bovina, Roxbury, Middletown and those portions of Colchester and Hancock south of the East Branch of the Delaware River.

Dutchess: All of the county except for the towns of Fishkill, East Fishkill, and Beacon.

Greene: That portion of the county south of a line following the south limits of the city of Catskill in a Westerly direction from the Hudson River to Highway 23A along 23A to the road following the Little Westkill and continuing along this road to Delaware County.

WAGES

Per hour:

07/01/2012

Electrician Wireman/Technician

\$ 37.00**

SHIFT DIFFERENTIAL: On Public Work in New York State when shift work is mandated either in the job specifications or by the contracting agency, the following rates apply:

Shift worked between 4:30pm & 12:30am

\$ 43.06*

Shift worked between 12:30am & 8:30am

\$ 47.99*

**On jobs where employees are required to work from bosun chairs, swinging scaffolds, etc., forty (40) feet or more above the ground, or under compressed air, using Scottair packs, gas masks or in shafts or tunnels, they shall receive an additional \$2.00 per hour above the regular straight time rate.

On jobs where employees are required to have CDL, Asbestos License, Welding Certificate, or Cable Splicing shall receive an additional \$ 1.00 above the journeyman rate.

SUPPLEMENTAL BENEFITS

Per hour worked:

07/01/2012

Journeyman

\$ 22.77 plus
6% of wage

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 13, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:

(6)month terms at the following percentage of journeyman's wage.*

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
30%	35%	40%	45%	50%	55%	65%	70%	75%	85%

* Denotes average Journeyman Wireman rate of pay of all wage zones.

Supplemental Benefits per hour worked:

07/01/2012

1st & 2nd term	\$ 8.06 plus 6% of wage
3rd & 4th term	10.32 plus 6% of wage
5th & 6th term	12.58 plus 6% of wage
7th & 8th term	15.99 plus 6% of wage
9th & 10th term	19.36 plus 6% of wage

11-363/2

Elevator Constructor

04/01/2013

JOB DESCRIPTION Elevator Constructor

DISTRICT 1

ENTIRE COUNTIES

Columbia, Dutchess, Greene, Orange, Putnam, Sullivan, Ulster

PARTIAL COUNTIES

Delaware: Towns of Andes, Bovina, Colchester, Davenport, Delhi, Harpersfield, Hemdon, Kortright, Meredith, Middletown, Roxbury, Hancock & Stamford

Rockland: Only the Township of Stony Point.

Westchester: Only the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North Salem, Pound Ridge, Somers and Yorktown.

WAGES

Per Hour	07/01/2012	01/01/2013	01/01/2014	01/01/2015
Mechanic	\$ 50.11	\$ 50.68	\$ 51.55	\$ 52.51

Helper 70% of Mechanic
Wage Rate

**** IMPORTANT NOTICE - EFFECTIVE 04/01/2009 ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked	07/01/2012	01/01/2013	01/01/2014	01/01/2015
Journeyman/Helper	\$ 23.535*	\$ 25.185*	\$ 26.785*	\$ 28.385*

(*)Plus 6% of gross wages if less than 5 years service

(*)Plus 8% of gross wages if more than 5 years service

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 15, 16) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE

Note: When a paid holiday falls on Saturday, it shall be observed on Friday. When a paid holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES

Wages per hour				
0-6 mo	6-12 mo	2nd yr	3rd yr	4th yr
50 %	55 %	65 %	70 %	80 %

Supplemental Benefits per hour worked

Same as Journeyman/Helper

1-138

Glazier

04/01/2013

JOB DESCRIPTION Glazier

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per hour:	07/01/2012	11/01/2012	05/01/2013 Additional
Glazier	\$ 47.75	\$ 48.60	\$ 1.50*
Scaffolding	\$ 48.75	\$ 49.60	\$ 1.50*

Repair & Maintenance:

Glazier **	\$ 26.50	\$ 26.50	\$ 1.50*
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* To be allocated at a future date

Repair & Maintenance- All repair & maintenance work on a particular building, whenever performed, where the total cumulative contract value is under \$100,000.00.

SUPPLEMENTAL BENEFITS

Per hour paid:	07/01/2012	11/01/2012	05/01/2013
Journeyworker...	\$ 25.34	\$ 25.34	\$ 26.60
Repair & Maintenance: Glazier **	\$ 15.14	\$ 15.14	\$ 15.64

OVERTIME PAY

OVERTIME: See (C*,D* E2, O) on OVERTIME PAGE.

* If an optional 8th hour is required to complete the entire project, the same shall be paid at the regular rate of pay. If a 9th hour is worked, then both hours or more (8th & 9th or more) will be paid at double time rate of pay.

** For Repair & Maintenance see (B,F, P) on overtime page.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (4, 6, 16, 25) on HOLIDAY PAGE

The Following are paid holidays for the Repair & Maintenance Class:

New Years day, Presidents day, Memorial day, Independents day, Labor day, Thanksgiving day, Day after Thanksgiving, and Christmas day.

REGISTERED APPRENTICES

Wage per hour:

(1) year terms at the following wage rates:

	07/01/2012	11/01/2012	05/01/2013 Additional
1st term	\$ 16.00	\$ 16.35	\$.60*
2nd term	\$ 23.81	\$ 24.24	\$.75*
3rd term	\$ 28.59	\$ 29.10	\$.90*
4th term	\$ 38.17	\$ 38.85	\$ 1.20*

* To be allocated at a future date

Supplemental Benefits:

(Per hour worked)

1st term	\$ 12.07
2nd term	\$ 17.28
3rd term	\$ 18.54
4th term	\$ 18.89

9-1281 (DC9 NYC)

Insulator - Heat & Frost

04/01/2013

JOB DESCRIPTION Insulator - Heat & Frost

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Sullivan, Ulster, Warren, Washington

WAGES

Wages per hour 07/01/2012

Asbestos Worker*	\$ 29.64
Insulator*	29.64
Firestopping Worker*	25.19

(*)On Mechanical Systems only.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 18.95
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OVERTIME PAY

See (*B1, **Q) on OVERTIME PAGE

*B1=Double time begins after 10 hours on Saturday

**Q=Triple time on Labor Day if worked.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When a holiday falls on Sunday the following Monday shall be observed as the holiday.

REGISTERED APPRENTICES

Wages per hour

one year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th
60 %	70 %	80 %	90 %

Supplemental Benefits per hour worked:

Apprentices \$ 18.95

1-40

Ironworker

04/01/2013

JOB DESCRIPTION Ironworker

DISTRICT 11

ENTIRE COUNTIES

Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster

WAGES

Per hour:

07/01/2012

Structural	\$ 42.20
Reinforcing*	42.20
Ornamental	42.20
Chain Link Fence	42.20

Shift Work: any irregular or off shift shall be paid 8 hours for 7 hours work.

*NOTE: For Reinforcing classification ONLY, Ironworker 4-46Reinf rates apply in Rockland county's southern section (south of Convent Road and east of Blue Hills Road).

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman \$ 30.15

OVERTIME PAY

OVERTIME:.....See (B*, E**, Q, V) on OVERTIME PAGE.

*Note: Double Time after 10 hours Monday thru Friday.

**Note: On Saturdays, double time after 8 hours.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:

(1) year terms at the following wage.

1st	2nd	3rd	4th
\$ 21.10	\$ 25.32	\$ 29.54	\$ 33.76

Supplemental Benefits per hour worked:

1st year	\$ 25.93
2nd year	26.77
3rd year	27.62
4th year	28.46

11-417

Laborer - Building

04/01/2013

JOB DESCRIPTION Laborer - Building

DISTRICT 11

ENTIRE COUNTIES

Orange, Sullivan, Ulster

PARTIAL COUNTIES

Delaware: Only the Townships of Andes, Bovina, Davenport, Delhi, Franklin, Hamden, Harpersfield, Kortright, Meredith, Middletown, Roxbury, and Stamford.

Greene: Only the Township of Catskill.

WAGES

GENERAL LABORER: Flag person, portable generator tender, portable pump tender, pitman and dumpman, temporary heat tender, traffic control, air chipping hammer, acoustic pump, mixer, concrete laborer, demolition, excavation, gunite, general cleanup, grading, backfilling, landscaping, mason tender, jackhammer, pavement breaker, tampers, walk behind roller, pressure blasting, signalperson, buggies, wrecking, asphalt, blaster, chain saw, chipping machine, corrugate pipe, cleaning machine, cutting torch, discharge pipe, drill chuck tender, explosive handler, hydraulic splitter, mega mixer, power brush cutter, pump crete machine, rip rap, Drilling Equipment Only Where a Separate Air Compressor Unit Supplies Power, assembling and placing of gabion baskets.

PREMIUM LABORER: Asbestos abatement work, toxic and hazardous abatement, lead abatement work, environmental work.

WAGES:(per hour)

	07/01/2012	06/01/2013 Additional
General	\$ 30.75	\$ 1.80*
Premium	35.30	

* To be allocated at a later date

These rates will cover all work within five feet of the building foundation line.

Shift Differential: On all Governmental mandated irregular or off shift work, an additional 25% of wage is required.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$ 21.85

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

Double time after the eighth hour on Saturday

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following wage rates.

	07/01/2012 Pre 2011*	07/01/2012 Post 2011**	06/01/2013 Additional
1st term	\$ 18.60	\$ 16.92	\$ 1.80***
2nd term	22.26	19.99	1.80***
3rd term	25.91	23.07	1.80***
4th term	29.56	26.14	1.80***

Supplemental Benefits per hour worked:

Apprentices \$ 16.05 \$ 16.05

*Pre 2011 shall include all apprentices enrolled before January 1 2011.

**Post 2011 shall include all apprentices enrolled on or after January 1 2011.

*** To be allocated at a later date

11-17.BA

Laborer - Heavy&Highway & Tunnel

04/01/2013

JOB DESCRIPTION Laborer - Heavy&Highway & Tunnel

DISTRICT 11

ENTIRE COUNTIES

Orange, Sullivan, Ulster

PARTIAL COUNTIES

Delaware: Only the Townships of Andes, Bovina, Middletown, Roxbury, Franklin, Hamden, Stamford, Delhi, Kortright, Harpersfield, Meredith, and Davenport.

Greene: Only the Township of Catskill.

WAGES

CLASS 1: Flagperson.

CLASS 2: General laborer, chuck tender, nipper, powder carrier, magazine tender, concrete men, vibrator men, mason tender, mortar men, traffic control, custodial work, temporary heat, pump men, pit men, dump men, asphalt men, joint setter, signalman, pipe men, riprap, dry stone layers, jack hammer, bush hammer, pavement breaker, gunnite nozzle, nozzle men on mulching & seeding machines all seeding & sod laying, landscape work, walk behind self-prop, powers saws, grinder, groover, walk behind rollers and tampers of all types, burner men, filling and wiring of baskets for gabion walls, chain saw operator, railroad track laborers, power buggy & pumpcrete ops. fireproof sprayer, plaster & acoustic pumps, asbestos, toxic, lead or hazardous materials when protective clothing & equipment is not required, power brush cutter, retention liners, walk behind surface planer, chipping hammer, manhole and catch basin on inlet building, mortar mixer, laser men.
*Micropaving and crack sealing.

CLASS 3: Asbestos, toxic, lead or hazardous materials abatement when protective clothing and equipment are required, blaster, Drilling Equipment Only Where a Separate Air Compressor Unit Supplies Power, **asphalt screedman.

CLASS 4: Blaster, all laborers involved in pipejacking, and boring operations.

Class 5: All laborers involved in shaft, tunnel and caisson operations.

WAGES:(per hour)

07/01/2012

CLASS 1	\$ 29.35
CLASS 2*	33.70
CLASS 3	37.60
CLASS 4	40.40
CLASS 5	42.10***

*NOTE: Micropaving and crack sealing laborers shall receive \$2.25 per hour over the CLASS 2 rate.

**NOTE: asphalt screedman shall receive \$1.00 per hour over class 3 rate

***NOTE: Safety minerr to receive an additional \$ 2.00

SHIFT DIFFERENTIAL: On all NYS D.O.T. or other Governmental mandated irregular or off shift work, an additional 15% of wage on straight time pay except on Tunnel (Class 5) Projects where 2nd and 3rd shifts shall be paid at one and a half times the Class 5 rate.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman	\$ 21.30
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Class 5 benefits at one and a half times for overtime, holidays, Saturday, Sunday, 2nd and 3rd Shifts.

OVERTIME PAY

See (B, E, P, *S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 15, 25) on HOLIDAY PAGE

Overtime: See (*1) on HOLIDAY PAGE

*Note: If Saturday Holiday is worked code S applies.

REGISTERED APPRENTICES

(1)year terms at the following wage rates.

Pre 2011 shall include all apprentices enrolled before January 1 2011

1st term	\$ 18.60
2nd term	22.26
3rd term	25.91
4th term	29.56

Post 2011 shall include all apprentices enrolled on or after January 1 2011

1st term	\$ 16.92
2nd term	19.99
3rd term	23.07
4th term	26.14

Supplemental Benefits per hour paid:

Apprentices	\$ 15.60
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Lineman Electrician

04/01/2013

JOB DESCRIPTION Lineman Electrician

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Per hour:

NOTE: Includes Teledata Work within Ten feet of High Voltage Transmission Lines

Below rates applicable on all overhead and underground distribution and maintenance work, and all overhead and underground transmission line work and the installation of fiber optic cable where no other construction trades are or have been involved. (14.01.01)

07/01/2012

Lineman /Techician	\$ 42.72
Welder/Cable Splicer	42.72
Digging Machine Operator	38.45
Tractor Trailer Driver	36.31
Groundman/Truck Driver	34.18
Mechanic 1st Class	34.18
Flagman	25.63

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all electrical sub-stations, switching structures, fiber optic cable and all other work not defined as "Utility outside electrical work". (14.02.01A)

Lineman/Technician	\$ 42.72
Cable Splicer pipe type cable	46.99
Certified Welder pipe type	44.86
Digging Machine Operator	38.45
Tractor Trailer Driver	36.31
Mechanic 1st Class	34.18
Groundman/Truck Driver	34.18
Flagman	25.63

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates apply on switching structures, maintenance projects, railroad catenary install/maint, third rail installation, bonding of rails and pipe type cable and installation of fiber optic cable. (14.02.01B)

Lineman/Technician/Welder	\$ 44.01
Digging Machine Operator	39.61
Tractor Trailer Driver	37.41
Groundman/Truck Driver	35.21
Mech. 1st Class	35.21
Flagman	26.41
Certified WelderPipe Type Cable	46.21
Cable Splicer pipe type cable	48.41

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all overhead and underground transmission line work & fiber optic cable where other construction trades are or have been involved. This applies to transmission line work only, not other construction. (14.03.01)

Lineman/Tech./Welder	\$ 45.23
Cable splicer	45.23
Digging Machine Operator	40.71
Tractor Trailer Driver	38.45
Groundman/Truck Driver	36.18
Mechanic 1st Class	36.18
Flagman	27.14

Additional \$1.00 per hour for entire crew when a helicopter is used.

**** IMPORTANT NOTICE - EFFECTIVE 04/01/2009 ****

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30R; additionally, there must be a dispensation of hours in place on the project.

SUPPLEMENTAL BENEFITS

Per hour worked including holidays listed below:

The following SUPPLEMENTAL benefits apply to all classification categories of CONSTRUCTION, TRANSMISSION and DISTRIBUTION.

\$ 18.25
*plus 7.5% of
hourly wage paid

OVERTIME PAY

See (B, E, Q,) on OVERTIME PAGE. Double time for all emergency work designated by the Dept. of Jurisdiction.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1st shift	8:00 AM to 4:30 PM REGULAR RATE
2nd shift	4:30 PM to 1:00 AM REGULAR RATE PLUS 17.3 %
3rd shift	12:30 AM to 9:00 AM REGULAR RATE PLUS 31.4 %

HOLIDAY

Paid	See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Gov. of NYS Election Day.
Overtime	See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Gov. of NYS Election Day.

SUPPLEMENTS for holidays paid at straight time

REGISTERED APPRENTICES

(1000) hr terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked:

The following SUPPLEMENTAL benefits apply to all classification categories of CONSTRUCTION, TRANSMISSION and DISTRIBUTION.

\$ 18.25
*plus 7.5% of
hourly wage paid

*NOTE: The 7.5% is based on the hourly wage paid, straight time rate or premium rate.

6-1249a

Lineman Electrician - Teledata

04/01/2013

JOB DESCRIPTION Lineman Electrician - Teledata

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour:

FOR WORK OUTSIDE BUILDING PROPERTY LINES.

	07/01/2012	01/01/2013	01/01/2014
Cable Splicer	\$ 27.99	\$ 28.55	\$ 29.12
Installer/Repairman	26.57	27.10	27.64
Teledata Lineman	26.57	27.10	27.64

Technician/Equip Oper	26.57	27.10	27.64
Groundman	14.09	14.37	14.66

NOTE: EXCLUDES Teledata work within ten feet of High Voltage (600 volts and over) transmission lines. For this work please see LINEMAN.

SUPPLEMENTAL BENEFITS

Per hour worked:

\$ 4.43	\$ 4.43	\$ 4.43
*plus 3% of hourly wage paid	*plus 3% of hourly wage paid	*plus 3% of hourly wage paid

*NOTE: The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16) on HOLIDAY PAGE

6-1249LT - Teledata

Lineman Electrician - Traffic Signal Lighting

04/01/2013

JOB DESCRIPTION Lineman Electrician - Traffic Signal Lighting

DISTRICT 6

ENTIRE COUNTIES

Columbia, Dutchess, Orange, Putnam, Rockland, Ulster

WAGES

Per hour:

For all Lighting and Traffic Signal Systems.

07/01/2012

Lineman/Technician	\$ 39.50
Certified Welder	41.48
Digging Machine	35.55
Tractor Trailer driver	33.58
Groundman Truck Driver	31.60
Mechanic 1st Class	31.60
Flagman	23.70

Above rates applicable on all Lighting and Traffic Signal Systems and the installation, testing, operation, maintenance and repair of all traffic control and illumination projects, traffic monitoring systems, road weather information systems and the installation of Fiber Optic Cable.

SUPPLEMENTAL BENEFITS

Per hour worked:

All classifications	\$ 18.25
	*plus 7% of hourly wage paid

*NOTE: The 7% is based on the hourly wage paid, straight time rate or premium rate.
Supplements paid at STRAIGHT TIME rate for holidays.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE. Note* Double time for all emergency work designated by the Dept. of Jurisdiction.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1ST SHIFT	8:00 AM TO 4:30 PM REGULAR RATE
2ND SHIFT	4:30 PM TO 1:00 AM REGULAR RATE PLUS 17.3%
3RD SHIFT	12:30 AM TO 9:00 AM REGULAR RATE PLUS 31.4%

HOLIDAY

HOLIDAY:

Paid See (5, 6, 8, 13, 25) on HOLIDAY PAGE and Gov of NYS Election Day.

Overtime See (5, 6, 8, 13, 25) on HOLIDAY PAGE and Gov of NYS Election Day.

REGISTERED APPRENTICES

WAGES: (1000) hr terms at the following percentage of Journeyman Lineman/Technician wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFITS: Same as Journeyman/Technician.

6-1249aReg8LT

Lineman Electrician - Tree Trimmer

04/01/2013

JOB DESCRIPTION Lineman Electrician - Tree Trimmer

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Per hour:

Applies to line clearance, tree work and right-of-way preparation on all new or existing energized overhead or underground electrical, telephone and CATV lines. This also would include stump removal near underground energized electrical lines, including telephone and CATV lines.

07/01/2012

Tree Trimmer	\$ 22.08
Equip Operator	19.48
Mechanic	19.48
Truck Driver	16.46
Groundman	13.51
Flag person	9.62

SUPPLEMENTAL BENEFITS

Per hour worked:

\$ 7.88
*plus 3% of
hourly wage paid

Supplements paid at STRAIGHT TIME rate for holidays.

*NOTE: The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE

6-1249TT

Mason - Building

04/01/2013

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Dutchess, Sullivan, Ulster

WAGES

Per hour:	07/01/2012	12/01/2012	06/01/2013
Building		Additional	Additional

Tile, Marble, & Terrazzo Finisher	\$ 38.28	\$ 1.15	\$ 1.25
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SUPPLEMENTAL BENEFITS

Journeyman: 07/01/2012

Per Hour. \$ 21.48
Overtime* 30.61*
Overtime** 39.23**

* Applies to work done on Weekdays and Saturdays

** Applies to work done on Sundays, Holidays, and more 10 on Saturdays.

OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 10, 11, 15, 16) on HOLIDAY PAGE

9-7/88B-tf

Mason - Building

04/01/2013

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Dutchess, Sullivan, Ulster

WAGES

Per hour:

	07/01/2012	12/01/2012 Additional	06/01/2013 Additional
Building:			
Tile, Marble, &			
Terrazzo Mechanic/Setter	\$ 43.27	\$ 1.50*	\$ 1.50*

* To be allocated at a future date

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyman:	\$ 25.79
Overtime*	35.17
Overtime**	44.54

* Applies to work done on Weekdays & Saturday

** Applies to work done on Sunday & Holidays, & over 10 hours on Saturdays.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

(750 hour) terms at the following wages:

1st	2nd	3rd	4th	5th	6th	7th	8th
\$21.63	\$25.05	\$27.70	\$30.36	\$32.73	\$35.16	\$37.95	\$42.22

Supplemental Benefits (per Hour):

1st	2nd	3rd	4th	5th	6th	7th	8th
\$12.90	\$12.93	\$13.74	\$14.53	\$15.61	\$16.64	\$20.75	\$23.39

9-7/52B

Mason - Building

04/01/2013

JOB DESCRIPTION Mason - Building

DISTRICT 11

ENTIRE COUNTIES

Dutchess, Sullivan, Ulster

PARTIAL COUNTIES

Orange: Entire county except the Township of Tuxedo.

WAGES

Per hour:

07/01/2012

06/01/2013

Bricklayer	\$ 37.53	\$ 37.57
Cement Mason Bldg	37.53	37.57
Plasterer/Stone Mason	37.53	37.57
Pointer/Caulker	37.53	37.57

Additional \$1.00 per hour for power saw work
Additional \$0.50 per hour for swing scaffold or staging work

SHIFT DIFFERENTIAL: When shift work is mandated or required by state, federal, county, local or other governmental agency contracts, the following rates apply.

Second shift an additional 15% of wage plus benefits to be paid
Third shift an additional 25% of wage plus benefits to be paid

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman	\$ 27.20	\$ 28.13
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OVERTIME PAY

Cement Mason See (D, E2, O) on OVERTIME PAGE.
All Others See (B, E, E2, Q) on OVERTIME PAGE.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

750 hour terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
50%	55%	60%	65%	70%	75%	80%	85%

Supplemental Benefits per hour paid

750 hour terms at the following percentage of journeyman supplements

1st	2nd	3rd	4th	5th	6th	7th	8th
50%	55%	60%	65%	70%	75%	80%	85%

Apprentices indentured before September 1, 2009 receive full journeyman benefits

11-5du-b

Mason - Heavy&Highway

04/01/2013

JOB DESCRIPTION Mason - Heavy&Highway

DISTRICT 11

ENTIRE COUNTIES

Dutchess, Sullivan, Ulster

PARTIAL COUNTIES

Orange: Entire county except the Township of Tuxedo.

WAGES

Per hour:

07/01/2012 06/01/2013

Bricklayer	\$ 38.03	\$ 38.07
Cement Mason	38.03	38.07
Marble/Stone Mason	38.03	38.07
Plasterer	38.03	38.07
Pointer/Caulker	38.03	38.07

Additional \$1.00 per hour for power saw work
Additional \$0.50 per hour for swing scaffold or staging work

SHIFT DIFFERENTIAL: When shift work is mandated or required by state, federal, county, local or other governmental contracts, the following rates apply.

Second shift an additional 15% of wage plus benefits to be paid

Third shift an additional 25% of wage plus benefits to be paid

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman	\$ 27.20	\$ 28.13
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OVERTIME PAY

See (B, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 15, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

750 hour terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
50%	55%	60%	65%	70%	75%	80%	85%

Supplemental Benefits per hour paid

750 hour terms at the following percentage of journeyman supplements

1st	2nd	3rd	4th	5th	6th	7th	8th
50%	55%	60%	65%	70%	75%	80%	85%

Apprentices indentured before September 1, 2009 receive full journeyman benefits

11-5du-H/H

Millwright

04/01/2013

JOB DESCRIPTION Millwright

DISTRICT 1

ENTIRE COUNTIES

Columbia, Greene, Sullivan, Ulster

WAGES

Per hour:

	07/01/2012	07/01/2013 An Additional	07/01/2014 An Additional
Millwright	\$ 31.61	\$1.34*	\$1.51*

Note: WELDER/HAZMAT - A Certified Welder shall received \$ 1.25 per hour in addition to the current journeyman's rate provided he/she is directed to perform certified welding. If a work site has been declared a hazardous site by the Owner and the use of protective gear (including, as a minimum, air purifying canister-type chemical respirators) are required, then that Employee shall receive a \$ 1.25 premium per hour.

(*)To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman	\$ 22.11
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OVERTIME PAY

See (B, E, *E2, Q) on OVERTIME PAGE

*Saturday may be used as a make-up day and worked at the straight time rate of pay during a work week when conditions such as weather, power failure, fire or natural disaster prevent the performance of work on a regularly scheduled work day. If a make-up day is utilized, a minimum of eight hours must be scheduled.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday that falls on Sunday shall be observed the following Monday. Any holiday that falls on Saturday shall be observed the preceding Friday.

REGISTERED APPRENTICES

(1)year terms at the following percentage of journeyman's rate.

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hours worked:

Apprentices:

1st term	\$ 11.11
2nd term	18.81
3rd term	19.91
4th term	21.01

1-1163

Operating Engineer - Building / Heavy&Highway

04/01/2013

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway

DISTRICT 11

ENTIRE COUNTIES

Delaware, Orange, Rockland, Sullivan, Ulster

WAGES

CLASS A: Autograde-Combn. Subgrader, Base Material Spreader and Base Trimme (CMI and Similar Types), Autograde Placer-Trimmer-Spreader Comb. (CMI & Similar types), Autograde Slipform Paver (CMI & Similar Types), Backhoe, Central Power Plants (all types), Chief of Party, Concrete Paving Machines, Cranes (all types, incl. Overhead & Straddle Traveling Type), Cranes-Gantry, Derricks (Land or Floating), Drillmaster, Quarrymaster (Down the Hole Drill), Rotary Drill, Self-Propelled Hydraulic Drill, Self-Powered Drill, Draglines, Elevator Graders, Front End Loaders (5 yds. and over), Gradalls, Grader-Rago, Helicopters (Co-Pilot), Helicopters (Communications Engineer), Locomotive (Large), Mucking Machines, Pavement & Concrete Breaker, i.e., Superhammer & Hoe Ram, Piledriver (length of boom including lead length shall determine premium rate applicable), Roadway Surface Grinder, Scooper (Loader and Shovel), Shovels, Tree Chopper with Boom and Trench Machines.

CLASS B: "A" Frame, Backhoe (Combination), Boom Attachment on Loaders (Rate based on size Bucket-not applicable to pipehook), Boring and Drilling Machines, Brush Chopper, Shredder and Tree Shredder, Cableways, Carryalls, Concrete Pump, Concrete Pumping System, Pumpcrete and Similar Types, Conveyors (125 ft. and over), Drill Doctor (duties incl. Dust Collector Maintenance), Front End Loaders (2 yds. but less than 5 yds.), Graders (Finish), Groove Cutting Machine (Ride on Type), Heater Planer, Hoists (all type Hoists, shall also include Steam, Gas, Diesel, Electric, Air Hydraulic, Single and Double Drum, Concrete, Brick Shaft Caisson, Snorkel Rood, and/or any other Similar Type Hoisting Machines, portable or stationary, except Chicago Boom Type), Long Boom Rate to be applied if Hoist is "Outside Material Tower Hoist," Hoists (Chicago Boom Type), Hydraulic Cranes-10 tons and under, Hydro-Axe, Jacks-Screw Air Hydraulic Power Operated Unit or Console Type (not hand Jack or Pile Load Test Type), Log Skidder, Pans, Pavers (all) concrete, Pumpcrete Machines, Squeeze-crete & Concrete Pumping (regardless of size), Scrapers, Side Booms, "Straddle" Carrier-Ross and similar types, Winch Trucks (Hoisting), Vacuum Truck, Whip Hammer.

CLASS C: Asphalt Curbing Machine, Asphalt Plant Engineer, Asphalt Spreaders, Autograde Tube Finisher and Texturing Machine (CMI & Similar types), Autograde curecrete machine (CMI & Similar Types), Autograde Curb Trimmer & Sidewalk, Shoulder, Slipform (CMI & Similar Types), Bar Bending Machines (Power), Batchers, Batching Plant and Crusher on Site, Belt Conveyor Systems, Boom Type Skimmer Machines, Bridge Deck Finisher, Bulldozer (all), Car Dumpers (Railroad), Compressor and Blower Type Units (used independently or mounted on dual purpose Trucks, on Job Site or in conjunction with jobsite, in Loading and Unloading of Concrete, Cement, Fly Ash, Instacrete, or Similar Type Materials), Compressors (2 or 3 in Battery), Concrete Breaking Machines, Concrete Finishing Machines, Concrete Saws and Cutters (Ride-on type) Concrete Spreaders (Hetzl, Rexomatic and Similar Types), Concrete Vibrators, Conveyors (under 125 feet), Crushing Machines, Directional Boring Machines, Ditching Machine-small (Ditch-witch, Vermeer, or Similar type), Dope Dots (Mechanical with or without pump), Dumpsters, Elevator, Fireman, Fork Lifts (Economobile, Lull and Similar Types of Equipment), Front End Loaders (1 yd. and over but under 2 yds.), Generators (2 or 3 in Battery), Giraffe Grinders, Graders & Motor Patrols, Gunnite Machines (excluding nozzle), Hammer Vibrator (in conjunction with Generator), Heavy Equipment Robotics Operator Technician, Hoists-Roof, Tugger, Aerial Platform Hoist & House Cars), Hoppers, Hopper Doors (power operated), Hydro Blaster, Ladders (motorized), Laddervator, Locomotive-dinky type, Maintenance -Utility Man, Mechanics, Mixers (Excepting Paving Mixers), Motor Patrols and Graders, Pavement Breakers (small self propelled ride on type-also maintains compressor hydraulic unit), Pavement Breaker-truck mounted, Pipe Bending Machine (Power), Pitch Pump, Plaster Pump (regardless of size), Post Hole Digger (Post Pounder & Auger), Rod Bending Machines (Power), Roller-Black Top, Scales (Power), Seaman pulverizing mixer, Shoulder widener, Silos, Skimmer Machines (boom-type), Steel Cutting Machine (service & maintain), Tractor, Tug Captain, Ultra High Pressure Waterjet Cutting Tool System, Vacuum Blasting Machine, Vibrating Plants (used inconjunction with unloading), Welder and Repair Mechanics.

CLASS D: Brooms and Sweepers, Chippers, Compressor (single), Concrete Spreaders (small type), Conveyor Loaders (not including Elevator Graders), Engines-large diesel (1620 HP) and Staging Pump, Farm Tractors, Fertilizing Equipment (Operation & Maint. of), Fine Grade Machine (small type), Form Line Graders (small type), Front End Loader (under 1 yard), Generator (single), Grease, Gas, Fuel and Oil supply trucks, Heaters (Nelson or other type incl. Propane, Natural Gas or Flowtype Units), Lights, Portable Generating Light Plants, Mixers (Concrete, small), Mulching Equipment (Operation and Maintenance of), Pumps (4 inch.suction & over incl. submersible pumps), Pumps (2 inch or less than four (4) inches such incl. submersible pumps), Pumps (Diesel Engine and Hydraulic-immaterial of power, Road Finishing Machines (small type), Rollers-grade, fill or stone base, Seeding Equip. (Operation and Maintenance of), Sprinkler & Water Pump Trucks (used on jobsite or in conjunction with jobsite), Steam Jennies and Boilers-irrespective of use, Stone Spreader, Tamping Machines, Vibrating Ride-on, Temporary Heating Plant (Nelson or other type, incl. Propane, Natural Gas or Flow Type Units), Water & Sprinkler Trucks (used on or in conjunction with jobsite), Welding Machines (Gas, Diesel, and/or Electric Converters of any type, single, two, or three in a battery), Wellpoint Systems (including installation by Bull Gang and Maintenance of).

CLASS E: Assistant Engineer/Oiler, Maintenance Apprentice (Deck Hand), Maintenance Apprentice (Oiler), Mechanics' Helper, Tire Repair and Maintenance, Transit/Instrument Man.

WAGES:(per hour)

	07/01/2012	01/01/2013
Class A	\$ 42.02	\$ 42.57
Class B	40.43	40.98
Class C	38.52	39.07
Class D	36.89	37.44
Class E	35.18	35.73
Helicopter:		
Pilot/Engineer	43.84	44.39
Lead/Safety Engineer	43.21	43.76
Surveying:		
Chief of Party	42.02	42.57
Transit/Instrument man	35.18	35.73
Rod/Chainman	32.60	33.15

SHIFT WORK: On all Government mandated irregular or off shift work, an additional 15% on straight time hours.

On machines with booms (including jib) of 100 to 139' an additional \$1.00 per hour. On machines with booms (including jib) of 140' and over an additional \$2.00 per hour. Additional 20% per hour for DEC or EPA certified toxic or hazardous waste work.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman	\$ 27.58	\$ 28.33
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SHIFT WORK: On all Government mandated irregular or off shift work, an additional 15% on straight time hours.

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 10, 15) on HOLIDAY PAGE
Overtime: See (5, 6, 10, 15) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour paid:

Apprentices	\$ 27.58	\$ 28.33
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11-825

Operating Engineer - Marine Construction

04/01/2013

JOB DESCRIPTION Operating Engineer - Marine Construction

DISTRICT 4

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per Hour:

DREDGING OPERATIONS 07/01/2012

CLASS A

Operator, Leverman, \$ 32.89

Lead Dredgeman

CLASS A1

Dozer,Front Loader

To conform to Operating Engineer
Prevailing Wage in locality where work

Operator is being performed including benefits.

CLASS B

Spider/Spill Barge Operator, Tug Operator(over1000hp), OperatorII, Fill Placer, Derrick Operator, Engineer, Chief Mate, Electrician, Chief Welder, Maintenance Engineer	\$ 28.49
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Certified Welder, Boat Operator(licensed)	\$ 26.84
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CLASS C

Drag Barge Operator, Steward, Mate, Assistant Fill Placer,	\$ 26.14
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Welder (please add)\$ 0.06

Boat Operator	\$ 25.29
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CLASS D

Shoreman, Deckhand, Rodman, Scowman, Cook, Messman, Porter/Janitor	\$ 21.09
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Oiler(please add)\$ 0.09

SUPPLEMENTAL BENEFITS

Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B	07/01/2012
	\$ 8.45 plus 7%
	of straight time
	wage overtime hours
	add \$ 0.63

All Class C	\$ 8.10 plus 8%
	of straight time
	wage overtime hours
	add \$ 0.48

All Class D	\$ 7.85 plus 8%
	of straight time
	wage overtime hours
	add \$ 0.33

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarConst

Operating Engineer - Steel Erectors

04/01/2013

JOB DESCRIPTION Operating Engineer - Steel Erectors

DISTRICT 11

ENTIRE COUNTIES

Delaware, Orange, Rockland, Sullivan, Ulster

WAGES

CLASS AA: Cranes (all cranes land or floating with booms including jib, 140 ft. and over above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, 140 ft. and over, above ground), Helicopters (Co-Pilot), Helicopters (Communications Engineer)

CLASS A: Cranes (all cranes, land or floating with booms including jib , 140 feet above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, 140 ft. above ground).

CLASS B: "A" Frame, Cherry Pickers(10 tons and under), Hoists (all type Hoists, shall also include Steam, Gas, Diesel, Electric, Air Hydraulic, Single and Double Drum, Concrete, Brick Shaft Caisson, Snorkel Rood, and/or any other Similar Type Hoisting Machines, portable or stationary, except Chicago Boom Type), Jacks-Screw Air Hydraulic Power Operated Unit or Console Type (not hand Jack or Pile Load Test Type), Side Booms, Straddle Carrier, Vacuum Truck.

CLASS C: Aerial Platform used as Hoist, Compressors (2 or 3 in Battery), Directional Boring Machines, Elevator or House Cars,Conveyers and Tugger Hoists, Fireman, ForkLifts, Generators (2 or 3 in Battery), Maintenance -Utility Man, Rod Bending Machines (Power), Tug Master, Ultra High Pressure Waterjet Cutting Tool System, Vacuum Blasting Machine, Welding Machines(gas or electric,2 or 3 in batter, including diesels), Transfer Machine.

CLASS D: Compressor (single), Welding Machines (Gas, Diesel, and/or Elec-tric Converters of any type), Welding System Multiple (Recitifier Transformer type).

CLASS E: Assistant Engineer/Oiler, Maintenance Apprentice (Deck Hand), Maintenance Apprentice (Oiler), Mechanics' Helper, Transit/Instrument Man.

WAGES:(per hour)

	07/01/2012	01/01/2013
Class AA	\$ 46.04	\$ 46.59
Class A	44.38	44.93
Class B	41.59	42.14
Class C	38.93	39.48
Class D	37.40	37.95
Class E	35.64	36.19
Helicopter: Pilot/Engineer	45.65	46.20
Surveying: Chief of Party	44.38	44.93
Transit/Instrument man	35.64	36.19
Rod/Chainman	32.60	33.15

SHIFT WORK: On all Government mandated irregular or off shift work, an additional 15% on straight time hours.

Additional 20% per hour for DEC or EPA certified toxic or hazardous waste work.

(*) To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyman	\$ 27.58	\$ 28.33
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SHIFT WORK: On all Government mandated irregular or off shift work, an additional 15% on straight time hours.

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 10, 15) on HOLIDAY PAGE
Overtime: See (5, 6, 10, 15) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour paid:

Apprentices	\$ 27.58	\$ 28.33
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11-825SE

Painter

04/01/2013

JOB DESCRIPTION Painter

DISTRICT 1

ENTIRE COUNTIES

Columbia, Dutchess, Greene, Orange, Sullivan, Ulster

WAGES

Per hour

07/01/2012

05/01/2013
An Additional

Brush/Paper Hanger	\$ 28.69	\$ 2.25*
Dry Wall Finisher	28.69	2.25*
Lead Abatement	28.69	2.25*
Sandblaster-Painter	28.69	2.25*
Spray Rate	29.69	2.25*

(*) To be allocated at a later date

See Bridge Painting rates for the following work:

Structural Steel (defined as any steel where a man works without the support of solid scaffolding or mechanical lifts excluding bridges), all work performed on tanks (100,000 gallons or over twenty feet high), ALL BRIDGES, towers, smoke stacks, flag poles. Rate shall apply to all of said areas from the ground up.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 17.29

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

Six (6) month terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th	5th	6th
40%	50%	60%	70%	80%	90%

Supplemental Benefits per hour worked

1st term	\$ 8.39
All others	17.29

1-155

Painter - Bridge & Structural Steel

04/01/2013

JOB DESCRIPTION Painter - Bridge & Structural Steel

DISTRICT 9

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per Hour Worked:

07/01/2012

10/1/2012

STEEL:

Bridge Painting \$ 51.23 \$ 52.23

Power Tool/Spray Additional \$6.00 per hour above hourly rate, whether straight time or overtime

Note: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SUPPLEMENTAL BENEFITS

Per Hour Worked:

07/01/2012

10/1/2012

Journeyworker	\$ 26.80*	\$ 27.05
	\$ 31.04**	

Hourly Rate after 40 hours from May 1st to Nov. 15th	\$ 6.75 only
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Hourly Rate after 50 hours from Nov. 16th to April 30th	\$ 6.75 only
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*For the period of May 1st to November 15th:

This rate shall be paid up to maximum of forty (40) hours worked per week. For all hours exceeding 40, the hourly rate shall drop to the hourly rate shown above by date.

EXCEPT for the first and last week of employment on the project, and for the weeks of Memorial Day, Independence Day and Labor Day, this rate shall be paid for the actual number of hours worked.

**For the period of November 16th to April 30th:

This rate shall be paid up to a maximum of fifty (50) hours worked per week. For all hours exceeding 50, the hourly rate shall drop to the hourly rate shown above by date.

OVERTIME PAY

See (A, F, R) on OVERTIME PAGE

NOTE: Calculate overtime rate as follows: Bridge Painting and Power Tool/Spray titles subtract \$4.98 from the hourly rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(Wage per hour Worked):

Apprentices: (1) year terms

	1st	2nd	3rd
07/01/2012	\$ 20.55	\$ 30.78	\$ 41.00
10/01/2012	\$ 20.95	\$ 31.38	\$ 41.80

Supplemental Benefits per hour worked:

07/01/2012	\$ 8.35	\$ 19.00	\$ 22.90
10/01/2012	\$ 8.70	\$ 19.15	\$ 23.10

9-DC-9/806/155-BrSS

Painter - Line Striping

04/01/2013

JOB DESCRIPTION Painter - Line Striping

DISTRICT 9

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per hour:

Painter (Striping-Highway):	07/01/2012
Striping-Machine Operator*	\$26.61 plus an additional \$0.50**
Linerman Thermoplastic	\$31.87 plus an additional \$0.50**

** To be allocated at a future date

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using hand held devices. Excludes the Driver/Operator of equipment used in the maintenance and protection of traffic safety

SUPPLEMENTAL BENEFITS

Per hour paid: 07/01/2012
Journeyworker:

Striping-Machine operator	\$ 14.18
Linerman Thermoplastic	\$ 14.55

OVERTIME PAY

See (*B, **B2, E, E2, P, S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 20) on HOLIDAY PAGE
Overtime: See (5, 8, 11, 12, 15, 16, 17, 20, 21, 22) on HOLIDAY PAGE

9-8A/28A-LS

Painter - Metal Polisher

04/01/2013

JOB DESCRIPTION Painter - Metal Polisher

DISTRICT 9

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

07/01/2012

Metal Polisher	\$ 26.11
Metal Polisher**	\$ 27.02
Metal Polisher***	\$ 29.61

**Note: Applies on New Construction & complete renovation

*** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2012

Journeyworker:

All classification \$ 12.92

OVERTIME PAY

See (B, E, Q, T) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year term at the following wage rates:

1st	2nd	3rd
\$13.50	\$15.00	\$18.00

Supplemental benefits:

Per hour paid:

1st	2nd	3rd
\$10.27	\$10.39	\$10.63

9-8A/28A-MP

Plumber

04/01/2013

JOB DESCRIPTION Plumber

DISTRICT 8

ENTIRE COUNTIES

Dutchess

PARTIAL COUNTIES

Delaware: Only the Townships of Middletown and Roxbury.

Ulster: Entire county (including Walkill and Shawangunk Prisons in Town of Shawangunk) EXCEPT for remainder of Town of Shawangunk, and Towns of Plattekill, Marlboro, and Wawarsing.

WAGES

(per hour)

07/01/2012

Plumber & Steamfitter	\$ 44.54
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SHIFT WORK:

When directly specified in public agency or authority contract documents, shift work outside the regular hours of work shall be comprised of eight (8) hours per shift not including Saturday, Sundays and holidays. One half (1/2) hour shall be allowed for lunch after the first four (4) hours of each shift. Wage and Fringes for shift work shall be straight time plus a shift premium of twenty-five (25%) percent. A minimum of five days Monday through Friday must be worked to establish shift work.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 24.19 per hour paid
+ 2.73 per hour worked**

**Not Subject to Overtime

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

* Note: Time & 1/2 for 1st. 8 on Sat.- all additional hours double time.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1)year terms at the following rates.

1st year	\$ 16.78
2nd year	23.40
3rd year	27.19
4th year	32.76
5th year	37.91

Supplemental Benefits per hour:

Apprentices

1st year	\$ 10.62 per hour paid + 1.16 per hour worked
2nd year	13.43 per hour paid + 1.30 per hour worked
3rd year	15.47 per hour paid + 1.60 per hour worked
4th year	17.13 per hour paid + 2.36 per hour worked
5th year	18.82 per hour paid + 2.36 per hour worked

8-21.2-SF

Plumber

04/01/2013

JOB DESCRIPTION Plumber

DISTRICT 11

ENTIRE COUNTIES

Orange, Rockland, Sullivan

PARTIAL COUNTIES

Ulster: Only the Townships of Plattekill, Marlboro, Wawarsing, and Shawangunk (except for Wallkill and Shawangunk Prisons).

WAGES

WAGES:(per hour) 07/01/2012

Total Projects
over \$230,000.00
Plumber/Steamfitter \$ 39.45

Total Projects
\$230,000.00 and under.
Plumber/Steamfitter \$ 33.53

*Note: For all work 40-60 feet above ground add \$ 0.25 per hour,
over 60 feet add \$ 0.50 per hour.

SUPPLEMENTAL BENEFITS

Per hour worked:

On Projects over \$230,000.00:
Journeyman \$ 30.49

On Projects \$230,000.00 and under:
Journeyman \$ 25.88

OVERTIME PAY

OVERTIME: (B, E, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following wages.

For Projects over \$230,000.00:

1st term	\$ 16.18
2nd term	20.22
3rd term	25.64
4th term	27.62
5th term	33.53

Supplemental Benefits per hour worked:

Apprentice	1st term	\$ 14.21
	2nd term	17.15
	3rd term	23.35
	4th term	24.36
	5th term	27.43

(1) year terms at the following wages.

For Projects \$230,000.00 and under:

1st term	\$ 13.41
2nd term	16.75
3rd term	21.79
4th term	23.47
5th term	28.50

Supplemental Benefits per hour worked:

Apprentice	1st term	\$ 12.02
	2nd term	14.48
	3rd term	19.80
	4th term	20.67
	5th term	23.26

11-373 SF

Plumber

04/01/2013

JOB DESCRIPTION Plumber

DISTRICT 11

ENTIRE COUNTIES

Orange, Rockland, Sullivan

PARTIAL COUNTIES

Ulster: Only the Townships of Plattekill, Marlboro, Wawarsing, and Shawangunk (except for Wallkill and Shawangunk Prisons).

WAGES

REFRIGERATION/AIR COOLING/AIR CONDITIONING: For all commercial plumbing/HVAC service and maintenance refrigeration where combined compressor tonnage does not exceed 40 tons. For water-cooled air conditioning where units do not exceed 25 tons, including piping of the component system and erection of water tower. For air-cooled air conditioning where units do not exceed 50 tons.

WAGES: (per hour)

07/01/2012

Plumber/Steamfitter \$ 31.31

SUPPLEMENTAL BENEFITS

Per hour paid:
Journeyman \$ 21.71

OVERTIME PAY

See (B, G, P) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 13, 15, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 13, 15, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1)year terms at the following wage.

1st.	2nd.	3rd.	4th.	5th.
\$ 12.52	\$ 15.65	\$ 18.78	\$ 21.91	\$ 26.61

Supplemental Benefits per hour paid:

Apprentices

1st term	\$ 9.86
2nd term	11.84
3rd term	13.80
4th term	15.77
5th term	18.73

11-373 Refrig

Plumber - HVAC / Service

04/01/2013

JOB DESCRIPTION Plumber - HVAC / Service

DISTRICT 8

ENTIRE COUNTIES

Dutchess, Putnam, Westchester

PARTIAL COUNTIES

Delaware: Only the townships of Middletown and Roxbury

Ulster: Entire County(including Wallkill and Shawangunk Prisons) except for remainder of Town of Shawangunk and Towns of Plattekill, Marlboro, and Wawarsing.

WAGES

Per hour: 07/01/2012

HVAC Service \$ 37.54

Jobbing & Alteration*
(Dutchess and Ulster County Only) \$ 34.89

*Repairs, replacements and alteration work is any repair or replacement of a present plumbing system that does not change existing roughing or water supply lines.

SHIFT WORK:

When directly specified in public agency or authority contract documents, shift work outside the regular hours of work shall be comprised of eight (8) hours per shift not including Saturday, Sundays and holidays. One half (1/2) hour shall be allowed for lunch after the first four (4) hours of each shift. Wage and Fringes for shift work shall be straight time plus a shift premium of twenty-five (25%) percent. A minimum of five days Monday through Friday must be worked to establish shift work.

SUPPLEMENTAL BENEFITS

Per hour worked: 07/01/2012

Journeyworker HVAC Service

\$ 17.00 per hour paid
+ 1.10 per hour worked**

Journeyworker Jobbing Alterations

\$ 19.63 per hour paid
+ 2.73 per hour worked**

** Not subject to overtime

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

Note: Time and one half for the first eight hours on Saturdays.

Additional hours on Saturday to be paid at double time.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
HVAC SERVICE

REGISTERED APPRENTICES
(1)year terms at the following wages.

	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.
07/01/2012	\$ 17.54	\$ 20.46	\$ 25.67	\$ 31.43	\$33.73

Supplemental Benefits per hour worked:

Apprentices	07/01/2012
1st term	\$ 14.75 per hour paid + 1.10 per hour worked
2nd term	\$ 15.12 per hour paid + 1.10 per hour worked
3rd term	\$ 15.64 per hour paid + 1.10 per hour worked
4th term	\$ 16.18 per hour paid + 1.10 per hour worked
5th term	\$ 16.60 per hour paid + 1.10 per hour worked

JOBGING & ALTERATIONS

REGISTERED APPRENTICES
(1)year terms at the following wages.

	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.
07/01/2012	\$ 14.08	\$ 18.53	\$ 22.13	\$ 25.80	\$ 29.69

Supplemental Benefits per hour worked:

Apprentices	07/01/2012
1st term	\$ 8.27 per hour paid + 0.50 per hour worked
2nd term	\$ 10.80 per hour paid + 0.93 per hour worked
3rd term	\$ 11.94 per hour paid + 1.05 per hour worked
4th term	\$ 14.49 per hour paid + 1.46 per hour worked
5th term	\$ 15.52 per hour paid + 1.90 per hour worked

8-21.1&2-SF/Re/AC

Roofer

04/01/2013

JOB DESCRIPTION Roofer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, New York, Orange, Putnam, Queens, Richmond, Rockland, Sullivan, Ulster, Westchester

WAGES

Per Hour: 07/01/2012

Roofer/Waterproofer \$ 39.00

SUPPLEMENTAL BENEFITS

Journeyworker \$ 27.92

OVERTIME PAY

See (B, H) on OVERTIME PAGE

Note: An observed holiday that falls on a Sunday will be observed the following Monday.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 13, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following percentage of Journeyworkers hourly wage.

1st	2nd	3rd	4th
35%	50%	60%	75%

Supplements per hour paid at the following rates:

Apprentice:	1st	2nd	3rd	4th
	\$ 4.24	\$ 14.13	\$ 16.88	\$ 21.03

9-8R

Sheetmetal Worker

04/01/2013

JOB DESCRIPTION Sheetmetal Worker

DISTRICT 8

ENTIRE COUNTIES

Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester

WAGES

	07/01/2012
SheetMetal Worker	\$ 41.81

SHIFT WORK

For all NYS D.O.T. and other Governmental mandated off-shift work:
10% increase for additional shifts for a minimum of five (5) days

SUPPLEMENTAL BENEFITS

Journeyworker	\$ 31.85
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OVERTIME PAY

OVERTIME:.. See (B, E, Q,) on OVERTIME PAGE.

*Note: For Sundays or Holidays worked, HOURLY WAGE is
double the total of the hourly wage plus the
hourly benefit paid all in wages. (Benefits are
included in the wages).

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 13, 16, 23) on HOLIDAY PAGE

REGISTERED APPRENTICES

1st	2nd	3rd	4th	5th	6th	7th	8th
\$15.43	\$17.35	\$ 19.28	\$ 21.21	\$ 23.13	\$ 25.07	\$ 27.27	\$ 29.70

Supplemental Benefits per hour:

Apprentices	
1st term	\$ 14.03
2nd term	15.80
3rd term	17.55
4th term	19.31
5th term	21.07
6th term	22.81
7th term	24.29
8th term	25.55

8-38

Sprinkler Fitter

04/01/2013

JOB DESCRIPTION Sprinkler Fitter

DISTRICT 1

ENTIRE COUNTIES

Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester

WAGES

Per hour

	07/01/2012	01/01/2013
Sprinkler	\$ 39.08	\$ 39.08
Fitter		

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman	\$ 20.65	\$ 20.80
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the following Monday shall be considered a holiday and all work performed on either day shall be at the double time rate. When a holiday falls on Saturday, the preceding Friday shall be considered a holiday and all work performed on either day shall be at the double time rate.

REGISTERED APPRENTICES

Wages per hour

For Apprentices HIRED PRIOR TO 04/01/2010:

One Half Year terms at the following wage

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 19.70	\$ 19.70	\$ 21.35	\$ 23.32	\$ 25.29	\$ 27.26	\$ 29.23	\$ 31.20	\$ 33.17	\$ 35.14

Supplemental Benefits per hour worked

	07/01/2012	01/01/2013
1st & 2nd Terms	\$ 8.74	\$ 8.74
3rd Term	14.87	15.02
4th Term	14.93	15.08
5th Term	20.24	20.39
6th Term	20.30	20.45
7th Term	20.36	20.51
8th Term	20.41	20.56
9th Term	20.47	20.62
10th Term	20.53	20.68

For Apprentices HIRED ON OR AFTER 04/01/2010:

One Half Year terms at the following wage

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 17.73	\$ 19.70	\$ 21.35	\$ 23.32	\$ 25.29	\$ 27.26	\$ 29.23	\$ 31.20	\$ 33.17	\$ 35.14

Supplemental Benefits per hour worked

	07/01/2012	01/01/2013
1st Term	\$ 8.68	\$ 8.68
2nd Term	8.74	8.74
3rd Term	14.87	15.02
4th Term	14.93	15.08
5th Term	15.49	15.64
6th Term	15.55	15.70
7th Term	15.61	15.76
8th Term	15.66	15.81
9th Term	15.72	15.87
10th Term	15.78	15.93

1-669.2

Teamster - Building / Heavy&Highway

04/01/2013

JOB DESCRIPTION Teamster - Building / Heavy&Highway

DISTRICT 11

ENTIRE COUNTIES

Dutchess, Orange, Rockland, Sullivan, Ulster

WAGES

GROUP 1: LeTourneau Tractors, Double Barrel Euclids, Athney Wagons and similar equipment (except when hooked to scrapers), Low Beds, I-Beam and Pole Trailers, Tire Trucks and Tractor and Trailers with 5 axles and over, Articulated Back Dumps and Road Oil Distributors, Articulated Water Trucks and Fuel Trucks.

GROUP 1A: Drivers on detachable Gooseneck Low Bed Trailers rated over 35 tons.

GROUP 2: All equipment 25 yards and up to and including 30 yard bodies and cable Dump Trailers and Powder and Dynamite Trucks.

GROUP 3: All Equipment up to and including 24-yard bodies, Mixer Trucks, Dump Crete Trucks and similar types of equipment, Fuel Trucks and Batch Trucks and all other Tractor Trailers.

GROUP 4: Tri-Axles, Ten Wheelers, Grease Trucks, Tillerman, Pattern Trucks, Intinuator Trucks. Water Trucks.

GROUP 5: Straight Trucks.

GROUP 6: Pick-up Trucks for hauling materials, parts, and Escort Man over-the-road.

WAGES: (per hour)	07/01/2012	05/01/2013
GROUP 1	\$ 30.35	\$ 30.75
GROUP 1A	31.49	31.89
GROUP 2	29.79	30.19
GROUP 3	29.57	29.97
GROUP 4	29.46	29.86
GROUP 5	29.34	29.74
GROUP 6	29.34	29.74

NOTE: additional 20% premium above the hourly wage for hazardous and toxic waste removal. This applies to all groups.

Shift Work: A shift premium of 10% on 2ND Shift and 15% on 3RD Shift will be paid for off-shift or irregular shift work when mandated by the NYS DOT or other governmental agency contracts.

SUPPLEMENTAL BENEFITS

Per hour paid:

First 40 hours	\$ 26.25	\$ 27.30
Over 40 hours	20.95	22.00

OVERTIME PAY

OVERTIME:.... See (B, E, P,T*,U**) on OVERTIME PAGE.

HOLIDAY

HOLIDAY:

Paid:..... See (5, 6, 13, 15, 25) on HOLIDAY PAGE.

Overtime:.. See (5, 6, 13, 15, 25) on HOLIDAY PAGE.

NOTE: Holidays worked Monday to Friday receive straight time wage for working, plus Holiday Pay.

*Holidays worked on Saturday, code T applies.

**Holidays worked on Sunday, code U applies.

11-445B/HH

Welder

04/01/2013

JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour 07/01/2012

Welder (To be paid the same rate of the mechanic performing the work)

OVERTIME PAY

HOLIDAY

1-As Per Trade

Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

- (A) Time and one half of the hourly rate after 7 hours per day
- (AA) Time and one half of the hourly rate after 7 and one half hours per day
- (B) Time and one half of the hourly rate after 8 hours per day
- (B1) Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday.
Double the hourly rate for all additional hours
- (B2) Time and one half of the hourly rate after 40 hours per week
- (C) Double the hourly rate after 7 hours per day
- (C1) Double the hourly rate after 7 and one half hours per day
- (D) Double the hourly rate after 8 hours per day
- (D1) Double the hourly rate after 9 hours per day
- (E) Time and one half of the hourly rate on Saturday
- (E1) Time and one half 1st 4 hours on Saturday Double the hourly rate all additional Saturday hours
- (E3) Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
- (E2) Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E4) Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (F) Time and one half of the hourly rate on Saturday and Sunday
- (G) Time and one half of the hourly rate on Saturday and Holidays
- (H) Time and one half of the hourly rate on Saturday, Sunday, and Holidays
- (I) Time and one half of the hourly rate on Sunday
- (J) Time and one half of the hourly rate on Sunday and Holidays
- (K) Time and one half of the hourly rate on Holidays
- (L) Double the hourly rate on Saturday
- (M) Double the hourly rate on Saturday and Sunday
- (N) Double the hourly rate on Saturday and Holidays
- (O) Double the hourly rate on Saturday, Sunday, and Holidays
- (P) Double the hourly rate on Sunday
- (Q) Double the hourly rate on Sunday and Holidays
- (R) Double the hourly rate on Holidays
- (S) Two and one half times the hourly rate for Holidays, if worked
- (S1) Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.
- (T) Triple the hourly rate for Holidays, if worked

- (U) Four times the hourly rate for Holidays, if worked
- (V) Including benefits at SAME PREMIUM as shown for overtime
- (W) Time and one half for benefits on all overtime hours.

NOTE: BENEFITS are PER HOUR WORKED, for each hour worked, unless otherwise noted

Holiday Codes

PAID Holidays:

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

- | | |
|--------|---|
| (1) | None |
| (2) | Labor Day |
| (3) | Memorial Day and Labor Day |
| (4) | Memorial Day and July 4th |
| (5) | Memorial Day, July 4th, and Labor Day |
| (6) | New Year's, Thanksgiving, and Christmas |
| (7) | Lincoln's Birthday, Washington's Birthday, and Veterans Day |
| (8) | Good Friday |
| (9) | Lincoln's Birthday |
| (10) | Washington's Birthday |
| (11) | Columbus Day |
| (12) | Election Day |
| (13) | Presidential Election Day |
| (14) | 1/2 Day on Presidential Election Day |
| (15) | Veterans Day |
| (16) | Day after Thanksgiving |
| (17) | July 4th |
| (18) | 1/2 Day before Christmas |
| (19) | 1/2 Day before New Years |
| (20) | Thanksgiving |
| (21) | New Year's Day |
| (22) | Christmas |
| (23) | Day before Christmas |
| (24) | Day before New Year's |
| (25) | Presidents' Day |
| (26) | Martin Luther King, Jr. Day |
| (27) | Memorial Day |



New York State Department of Labor - Bureau of Public Work
State Office Building Campus
Building 12 - Room 130
Albany, New York 12240

REQUEST FOR WAGE AND SUPPLEMENT INFORMATION

As Required by Articles 8 and 9 of the NYS Labor Law

Fax (518) 485-1870 or mail this form for new schedules or for determination for additional occupations.

This Form Must Be Typed

Submitted By:

(Check Only One)

☐

Contracting Agency

☐

Architect or Engineering Firm

☐

Public Work District Office

Date:

A. Public Work Contract to be let by: (Enter Data Pertaining to Contracting/Public Agency)

1. Name and complete address ☐ (Check if new or change)

Telephone: ()

Fax: ()

E-Mail:

2. NY State Units (see Item 5)

☐ 01 DOT

☐ 02 OGS

☐ 03 Dormitory Authority

☐ 04 State University
Construction Fund

☐ 05 Mental Hygiene
Facilities Corp.

☐ 06 OTHER N.Y. STATE UNIT

☐ 07 City

☐ 08 Local School District

☐ 09 Special Local District, i.e.,
Fire, Sewer, Water District

☐ 10 Village

☐ 11 Town

☐ 12 County

☐ 13 Other Non-N.Y. State
(Describe)

3. SEND REPLY TO ☐ (check if new or change)
Name and complete address:

Telephone: ()

Fax: ()

E-Mail:

4. SERVICE REQUIRED. Check appropriate box and provide project information.

☐ New Schedule of Wages and Supplements.

APPROXIMATE BID DATE :

☐ Additional Occupation and/or Redetermination

PRC NUMBER ISSUED PREVIOUSLY FOR
THIS PROJECT :

OFFICE USE ONLY

B. PROJECT PARTICULARS

5. Project Title

Description of Work

Contract Identification Number

Note: For NYS units, the OSC Contract No.

6. Location of Project:

Location on Site

Route No/Street Address

Village or City

Town

County

7. Nature of Project - Check One:

☐ 1. New Building

☐ 2. Addition to Existing Structure

☐ 3. Heavy and Highway Construction (New and Repair)

☐ 4. New Sewer or Waterline

☐ 5. Other New Construction (Explain)

☐ 6. Other Reconstruction, Maintenance, Repair or Alteration

☐ 7. Demolition

☐ 8. Building Service Contract

8. OCCUPATION FOR PROJECT :

☐ Construction (Building, Heavy
Highway/Sewer/Water)

☐ Tunnel

☐ Residential

☐ Landscape Maintenance

☐ Elevator maintenance

☐ Exterminators, Fumigators

☐ Fire Safety Director, NYC Only

☐ Guards, Watchmen

☐ Janitors, Porters, Cleaners,
Elevator Operators

☐ Moving furniture and
equipment

☐ Trash and refuse removal

☐ Window cleaners

☐ Other (Describe)

9. Has this project been reviewed for compliance with the Wicks Law involving separate bidding?

YES ☐ NO ☐

10. Name and Title of Requester

Signature



NEW YORK STATE DEPARTMENT OF LABOR
Bureau of Public Work - Debarment List

**LIST OF EMPLOYERS INELIGIBLE TO BID ON OR BE
AWARDED ANY PUBLIC WORK CONTRACT**

Under Article 8 and Article 9 of the NYS Labor Law, a contractor, sub-contractor and/or its successor shall be debarred and ineligible to submit a bid on or be awarded any public work or public building service contract/sub-contract with the state, any municipal corporation or public body for a period of five (5) years from the date of debarment when:

- Two (2) final determinations have been rendered within any consecutive six-year (6) period determining that such contractor, sub-contractor and/or its successor has WILLFULLY failed to pay the prevailing wage and/or supplements
- One (1) final determination involves falsification of payroll records or the kickback of wages and/or supplements

NOTE: The agency issuing the determination and providing the information, is denoted under the heading 'Fiscal Officer'. DOL = NYS Dept. of Labor; NYC = New York City Comptroller's Office; AG = NYS Attorney General's Office; DA = County District Attorney's Office.

A list of those barred from bidding, or being awarded, any public work contract or subcontract with the State, under section 141-b of the Workers' Compensation Law, may be obtained at the following link, on the NYS DOL Website:

<https://dbr.labor.state.ny.us/EDList/searchPage.do>

NYSDOL Bureau of Public Work Debarment List 04/05/2013
Article 8

AGENCY	Fiscal Officer	FEIN	EMPLOYER NAME	EMPLOYER DBA NAME	ADDRESS	DEBARMENT START DATE	DEBARMENT END DATE
DOL	DOL		4618 FOSTER AVE LLC		C/O KAHAN & KAHAN 225 BROADWAY-SUITE 715NEW YORK NY 10007	02/05/2013	02/05/2018
DOL	NYC		A & T IRON WORKS INC		25 CLIFF STREET NEW ROCHELLE NY 10801	12/21/2009	12/21/2014
DOL	DOL	*****0711	A ULIANO & SON LTD		22 GRIFFEN COURT MILLER PLACE NY 11746	10/26/2010	10/26/2015
DOL	DOL		A ULIANO CONSTRUCTION		22 GRIFFEN COURT MILLER PLACE NY 11746	10/26/2010	10/26/2015
DOL	NYC	*****5804	AAR/CO ELECTRIC INC		5902 AVENUE N BROOKLYN NY 11234	03/20/2009	03/20/2014
DOL	NYC	*****4486	ABBAY PAINTING CORP		21107 28TH AVENUE BAYSIDE NY 11360	07/02/2012	07/02/2017
DOL	DOL	*****9095	ABDO TILE CO		6179 EAST MOLLOY ROAD EAST SYRACUSE NY 13057	06/25/2010	07/02/2017
DOL	DOL	*****9095	ABDO TILE COMPANY		6179 EAST MOLLOY ROAD EAST SYRACUSE NY 13057	06/25/2010	07/02/2017
DOL	DOL	*****0635	ABOVE ALL PUMP REPAIR CORP		360 KNICKERBOCKER AVENUE BATAVIA NY 11716	10/20/2008	10/20/2013
DOL	DOL	*****1219	ABSOLUTE GENERAL CONTRACTING INC		1229 AVENUE U BROOKLYN NY 11229	01/28/2013	01/28/2018
DOL	AG	*****8219	ACTIVE CABLING INC		C/O FRANK DECAPITE 7 SYCAMORE ROAD DRWOODBURY NY 11797	10/02/2008	10/01/2013
DOL	DOL		ADAM A CEMERYS		2718 CURRY ROAD SCHENECTADY NY 12303	07/08/2010	07/08/2015
DOL	DOL	*****7584	ADAM'S FLOOR COVERING LLC		2718 CURRY ROAD SCHENECTADY NY 12303	07/08/2010	02/15/2017
DOL	DOL		ADESUWA UWJIGBE		P O BOX 21-1022 BROOKLYN NY 11221	05/16/2012	05/16/2017
DOL	DOL		AFFORDABLE PAINTING PLUS		367 GREEVES ROAD NEW HAMPTON NY 10958	10/01/2010	10/01/2015
DOL	DOL		ALBERT CASEY		43-28 54TH STREET WOODSIDE NY 11377	07/01/2011	07/01/2016
DOL	DOL		ALEJANDRO MATOS		C/O SEVEN STAR ELECTRICAL 23-24 STEINWAY STREETASTORIA NY 11105	06/27/2011	06/27/2016
DOL	DOL	*****8740	ALLSTATE ENVIRONMENTAL CORP		C/O JOSE MONTAS 27 BUTLER PLACEYONKERS NY 10710	03/18/2011	03/15/2017
DOL	DOL	*****8534	ALPHA INTERIORS INC		513 ACORN STREET/ SUITE C DEER PARK NY 11729	05/27/2010	05/27/2015
DOL	DOL	*****4274	AMERICAN STEEL MECHANICAL INC		693 PAINTER STREET MEDIA PA 19063	02/20/2013	02/20/2018
DOL	DOL	*****8291	AMIR'S VISION INC		230 PRATT STREET BUFFALO NY 14204	09/17/2008	09/17/2013
DOL	NYC		ANDERSON LOPEZ		670 SOUTHERN BLVD BRONX NY 10455	06/14/2011	06/14/2016
DOL	DOL		ANDREW DIPPAUL		C/O CONSOLIDATED INDUSTRI 2051 ROUTE 44/55MODENA NY 12548	12/11/2012	12/11/2017
DOL	AG		ANTHONY BRANCA		700 SUMMER STREET STAMFORD CT	11/24/2009	11/24/2014
DOL	DA		ANTHONY CARDINALE		58-48 59TH STREET MASPETH NY 11378	05/16/2012	05/16/2017
DOL	DOL		ANTHONY POSELLA		30 GLEN HOLLOW ROCHESTER NY 14622	10/19/2009	10/19/2014
DOL	DOL		ANTHONY TAORMINA		215 MCCORMICK DRIVE BOHEMIA NY 11716	05/20/2009	05/20/2014
DOL	DOL		ANTHONY ULIANO		22 GRIFFEN COURT MILLER PLACE NY 11746	10/26/2010	10/26/2015
DOL	DOL	*****3020	APCO CONTRACTING CORP		24 SOUTH MARYLAND AVENUE PORT WASHINGTON NY 11050	09/24/2012	09/24/2017
DOL	DOL	*****8688	ARC MECHANICAL CORP		215 MCCORMICK DRIVE BOHEMIA NY 11716	05/20/2009	05/20/2014
DOL	DOL	*****8482	ARGO CONTRACTING CORP		5752 WEST WEBB ROAD YOUNGSTOWN OH 44515	05/21/2008	05/21/2013
DOL	NYC		ARIE BAR		5902 AVENUE N BROOKLYN NY 11234	03/20/2009	03/20/2014
DOL	DOL	*****9336	ARTIERI SPECIALTIES LLC	SWITZER SALES	107 STEVENS STREET LOCKPORT NY 14094	11/04/2009	11/04/2014

NYSDOL Bureau of Public Work Debarment List 04/05/2013

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DOL	DOL	*****3953	ASCPAPE LANDSCAPE & CONSTRUCTION CORP		634 ROUTE 303 BLAUVELT NY 10913	07/26/2012	07/26/2017
DOL	DOL	*****2993	AST DRYWALL & ACOUSTICS INC		46 JOHN STREET - STE 711 NEW YORK NY 10038	12/16/2008	12/16/2013
DOL	DOL	*****2534	B & B CONCRETE CONTRACTORS INC		55 OLD TURNPIKE ROAD SUITE 612NANUET NY 10954	02/04/2011	02/04/2016
DOL	NYC		BASIL ROMEO		243-03 137TH AVENUE ROSEDALE NY 11422	03/25/2010	03/25/2015
DOL	DOL		BEATRICE ORTEGA		764 BRADY AVE - APT 631 BRONX NY 10462	05/21/2008	05/21/2013
DOL	DOL	*****2294	BEDELL CONTRACTING CORP		2 TINA LANE HOPEWELL JUNCTION NY 12533	01/06/2012	01/06/2017
DOL	DOL		BENNY VIGLIOTTI		C/O LUVIN CONSTRUCTION CO P O BOX 357CARLE PLACE NY 11514	03/15/2010	03/15/2015
DOL	NYC		BERNARD COHNEN		193 HARWOOD PLACE PARAMUS NJ 07652	05/14/2008	05/14/2013
DOL	DOL	*****6999	BEST ROOFING OF NEW JERSEY LLC		30 MIDLAND AVENUE WALLINGTON NJ 07057	11/05/2010	11/05/2015
DOL	DOL		BIAGIO CANTISANI		200 FERRIS AVENUE WHITE PLAINS NY 10603	12/04/2009	05/04/2017
DOL	DOL	*****8501	BLOCKHEAD CONCRETE & PAVING INC		P O BOX 71 CHEEKTOWAGA NY 14225	09/03/2008	09/03/2013
DOL	NYC	*****8377	BOSPHORUS CONSTRUCTION CORPORATION		3817 KINGS HIGHWAY-STE 1D BROOKLYN NY 11234	06/30/2010	06/30/2015
DOL	DOL		BRIAN HOXIE		2219 VALLEY DRIVE SYRACUSE NY 13207	12/04/2009	12/04/2014
DOL	DOL	*****4311	C & F SHEET METAL CORP		201 RICHARDS STREET BROOKLYN NY 11231	02/25/2009	02/24/2014
DOL	DOL		CANTISANI & ASSOCIATES LTD		442 FERRIS AVENUE WHITE PLAINS NY 10603	12/04/2009	05/04/2017
DOL	DOL		CANTISANI HOLDING LLC		220 FERRIS AVENUE WHITE PLAINS NY 10603	05/04/2012	05/04/2017
DOL	DOL	*****1143	CARMODY BUILDING CORP		442 ARMONK ROAD MOUNT KISCO NY 10549	05/04/2012	05/04/2017
DOL	DOL	*****3368	CARMODY CONCRETE CORP		442 ARMONK ROAD MOUNT KISCO NY 10549	12/04/2009	05/04/2017
DOL	DOL		CARMODY CONTRACTING CORP		220 FERRIS AVENUE WHITE PLAINS NY 10603	05/04/2012	05/04/2017
DOL	DOL	*****6215	CARMODY CONTRACTING INC		220 FERRIS AVENUE WHITE PLAINS NY 10603	05/04/2012	05/04/2017
DOL	DOL		CARMODY ENTERPRISES LTD		220 FERRIS AVENUE WHITE PLAINS NY 10603	12/04/2009	05/04/2017
DOL	DOL	*****3812	CARMODY INC		442 ARMONK ROAD MOUNT KISCO NY 10549	12/04/2009	05/04/2017
DOL	DOL	*****3812	CARMODY INDUSTRIES INC		442 FERRIS AVENUE WHITE PLAINS NY 10603	05/04/2012	05/04/2017
DOL	DOL		CARMODY MAINTENANCE CORP		105 KISCO AVENUE MOUNT KISCO NY 10549	05/04/2012	05/04/2017
DOL	DOL	*****0324	CARMODY MASONRY CORP		442 ARMONK ROAD MOUNT KISCO NY 10549	12/04/2009	05/04/2017
DOL	DOL	*****3812	CARMODY"2" INC		220 FERRIS AVENUE WHITE PLAINS NY 10603	12/04/2009	05/04/2017
DOL	DOL	*****9721	CATENARY CONSTRUCTION CORP		112 HUDSON AVENUE ROCHESTER NY 14605	02/14/2006	10/20/2014
DOL	DOL	*****1683	CATONE CONSTRUCTION COMPANY INC		294 ALPINE ROAD ROCHESTER NY 14423	03/09/2012	03/09/2017
DOL	DOL		CATONE ENTERPRISES INC		225 DAKOTA STREET ROCHESTER NY 14423	03/09/2012	03/09/2017
DOL	DOL	*****7924	CBI CONTRACTING INCORPORATED		2081 JACKSON AVENUE COPIAGUE NY 11726	06/03/2010	06/03/2015
DOL	DOL		CHARLES OKRASKI		67 WARD ROAD SALT POINT NY 12578	01/21/2011	01/21/2016
DOL	DOL		CHARLES RIBAUDO		513 ACORN ST - SUITE C DEER PARK NY 11729	05/27/2010	05/27/2015
DOL	DOL	*****1416	CHEROMINO CONTROL GROUP LLC		61 WILLET ST - SUITE 14 PASSAIC NJ 07055	12/03/2009	02/23/2017
DOL	DOL		CHESTER A BEDELL		1233 WALT WHITMAN ROAD MELVILLE NY 11747	04/29/2008	04/29/2013
DOL	DOL		CHRIS SAVOURY		44 THIELLS-MT IVY ROAD POMONA NY 10970	10/14/2011	10/14/2016
DOL	DOL		CHRIST R PAPAS		C/O TRAC CONSTRUCTION INC 9091 ERIE ROADANGOLA NY 14006	02/03/2011	02/03/2016

NYSDOL Bureau of Public Work Debarment List 04/05/2013
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DOL	DOL		CHRISTOF PREZBYL		2 TINA LANE HOPEWELL JUNCTION NY 12533	01/06/2012	01/06/2017
DOL	DOL		CITY GENERAL BUILDERS INC		131 MELROSE STREET BROOKLYN NY 11206	03/02/2010	03/02/2015
DOL	DOL	*****7086	CITY GENERAL IRON WORKS INC		131 MELROSE STREET BROOKLYN NY 11206	03/02/2010	03/02/2015
DOL	DOL	*****5329	CNY MECHANICAL ASSOCIATES INC		P O BOX 250 EAST SYRACUSE NY 13057	11/06/2008	11/06/2013
DOL	NYC	*****1768	COFIRE PAVING CORPORATION		120-30 28TH AVENUE FLUSHING NY 11354	01/14/2011	01/14/2016
DOL	DOL	*****8342	CONKLIN PORTFOLIO LLC		60 COLONIAL ROAD STILLWATER NY 12170	02/15/2011	02/15/2016
DOL	DOL	*****4175	CONSOLIDATED INDUSTRIAL SERVICES INC		2051 ROUTE 44/55 MODENA NY 12548	12/11/2012	01/28/2018
DOL	DOL	*****5740	CORTLAND GLASS COMPANY INC		336 TOMPKINS STREET CORTLAND NY 13045	10/21/2010	07/15/2016
DOL	NYC	*****8777	CROSSLAND ELECTRICAL SYSTEMS INC		846 EAST 52ND STREET BROOKLYN NY 11203	12/19/2008	12/29/2013
DOL	DOL	*****0115	CROW AND SUTTON ASSOCIATES INC		949 GROVESIDE ROAD BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL	*****4266	CRYSTAL INTERIOR CONTRACTING INC		922 CRESCENT STREET BROOKLYN NY 11208	05/21/2008	05/21/2013
DOL	DOL	*****1804	CUSTOM GARDEN LANDSCAPING INC		283 NORTH MIDDLETOWN ROAD PEARL RIVER NY 10965	09/28/2009	09/28/2014
DOL	DOL	*****9453	D & D MASON CONTRACTORS INC		158-11 96TH STREET HOWARD BEACH NY 11414	06/25/2009	06/25/2014
DOL	DOL	*****0810	D & G PAINTING & DECORATING INC		53 LITTLE COLLABAR ROAD MONTGOMERY NY 12549	04/19/2012	04/19/2017
DOL	DOL		D JAMES SUTTON		949 GROVESIDE ROAD BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL		DANIEL CELLUCCI ELECTRIC		17 SALISBURY STREET GRAFTON MA 01519	06/02/2010	06/02/2015
DOL	DOL	*****7129	DANIEL T CELLUCCI	DANIEL CELLUCCI ELECTRIC	17 SALISBURY STREET GRAFTON MA 01519	06/02/2010	06/02/2015
DOL	DOL		DARIN ANDERSON		134-25 166 PLACE #5E JAMAICA NY 11434	08/07/2008	08/07/2013
DOL	DOL		DARREN MAYDWELL		115 LEWIS STREET YONKERS NY 10703	05/12/2009	05/12/2014
DOL	DOL		DEAN ROBBINS III		212 OXFORD WAY SCHENECTADY NY 12309	12/11/2012	02/20/2018
DOL	DOL		DEANNA J REED		5900 MUD MILL RD-BOX 949 BREWERTON NY 13029	09/02/2008	09/02/2013
DOL	DOL	*****2311	DELCON CONSTRUCTION CORP		220 WHITE PLAINS ROAD TARRYTOWN NY 10591	08/27/2009	08/27/2014
DOL	DOL	*****3538	DELTA CONTRACTING PAINTING AND DESIGN INC		75 MCCULLOCH DRIVE DIX HILLS NY 11746	10/19/2010	10/19/2015
DOL	DOL		DEMETRIOS KOUTSOURAS		530 BEECH STREET NEW HYDE PARK NY 11040	07/02/2012	07/02/2017
DOL	DOL		DESMOND CHARLES		922 CRESCENT STREET BROOKLYN NY 11208	05/21/2008	05/21/2013
DOL	DOL		DIANE DEEVER		731 WARWICK TURNPIKE HEWITT NJ 07421	06/25/2012	12/11/2017
DOL	DOL		DIMITEIUS KASSIMIS		152-65 11TH AVENUE WHITESTONE NY 11357	05/22/2008	05/22/2013
DOL	DOL		DONALD NOWAK		10 GABY LANE CHEEKTOWAGA NY 14227	10/15/2009	10/15/2014
DOL	DOL		DORIS SKODA		C/O APCO CONTRACTING CORP 24 SOUTH MARYLAND AVENUEPORT WASHINGTON NY 11050	09/24/2012	09/24/2017
DOL	DOL	*****6148	DOT CONSTRUCTION OF NY INC		765 BRADY AVE - APT 631 BRONX NY 10462	05/21/2008	05/21/2013
DOL	DOL		DRAGOLJUB RADOJEVIC	61 WILLET ST - SUITE 14	PASSAIC NJ 07055	12/03/2009	07/09/2015
DOL	NYC	*****6176	E N E L ELECTRICAL CORP		1107 MCDONALD AVENUE BROOKLYN NY 11230	07/30/2010	07/30/2015
DOL	DOL	*****8011	ECO CLEANING CONTRACTORS INC		P O BOX 21-1022 BROOKLYN NY 11221	05/16/2012	05/16/2017
DOL	NYC	*****8074	ECONOMY IRON WORKS INC		670 SOUTHERN BLVD BRONX NY 10455	06/14/2011	06/14/2016
DOL	DOL		EDWARD L GAUTHIER		C/O IMPERIAL MASONRY REST 141 ARGONNE DRIVEKENMORE NY 14217	10/03/2012	10/03/2017

NYSDOL Bureau of Public Work Debarment List 04/05/2013

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DOL	DOL		EDWARD SUBEH		1 CHELSEA COURT ATLANTIC CITY NJ 08401	10/06/2008	10/06/2013
DOL	NYC	*****6260	EL TREBOL SPECIAL CLEANING INC		95-26 76TH STREET OZONE PARK NY 11416	10/12/2011	10/12/2016
DOL	DOL	*****3554	ELITE BUILDING ENTERPRISES INC		34-08 PARKWAY DRIVE BALDWIN NY 11510	07/01/2008	07/21/2013
DOL	DOL	*****0780	EMES HEATING & PLUMBING CONTR		5 EMES LANE MONSEY NY 10952	01/20/2002	01/20/3002
DOL	DOL	*****6101	ENHANCED DATA COM INC		75 SHERBROOK ROAD NORTH BABYLON NY 11704	07/01/2010	07/01/2015
DOL	DOL		ERIKA BARNETT		253 BEACH BREEZE LANE UNIT BARVERNE NY 11692	02/05/2013	02/05/2018
DOL	DOL		ERROL L ALLEN		134-25 166 PLACE #5E JAMAICA NY 11434	08/07/2008	08/07/2013
DOL	DOL		ESCO INSTALLERS LLC		1 CHELSEA COURT ATLANTIC CITY NJ 08401	10/06/2008	10/06/2013
DOL	DOL		ESTEVEZ & FRAGA CONSTRUCTION CO INC		986 MADISON AVENUE PATERSON NJ 07501	01/03/2013	01/03/2018
DOL	DOL		ESTEVEZ & FRAGA INC		986 MADISON AVENUE PATERSON NJ 07501	01/03/2013	01/03/2018
DOL	DOL		EVELIO ELLEDIAS		114 PEARL STREET PORT CHESTER NY 10573	08/15/2012	08/15/2017
DOL	DOL	*****0329	FAULKES PLUMBING HEATING & AIR CONDITIONING INC		3 UPTON STREET HILTON NY 14468	06/10/2008	06/10/2013
DOL	DOL		FERNANDO GOMEZ		201 RICHARDS STREET BROOKLYN NY 11231	02/25/2009	02/25/2014
DOL	DOL	*****0768	FISHER CONCRETE INC		741 WELSH ROAD JAVA CENTER NY 14082	04/08/2009	04/08/2014
DOL	DOL	*****5867	FJM-FERRO INC		6820 14TH AVENUE BROOKLYN NY 11219	10/27/2011	10/27/2016
DOL	DOL		FMS		4 LEGHORN COURT NEW YORK NY 11746	11/28/2012	11/28/2017
DOL	DOL	*****8067	FORTH SPORT FLOORS INC		P O BOX 74 EAST GREENBUSH NY 12061	02/28/2012	10/01/2017
DOL	DOL	*****0115	FOXCROFT NURSERIES INC		949 GROVESIDE ROAD BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL		FRANCIS (FRANK) OSCIER		3677 SENECA STREET WEST SENECA NY 14224	09/03/2008	09/03/2013
DOL	NYC		FRANK (FRANCIS) OSCIER		3677 SENECA STREET WEST SENECA NY 14224	09/03/2008	09/03/2013
DOL	NYC		FRANK ACOCCELLA		68 GAYLORD ROAD SCARSDALE NY 10583	02/10/2011	02/10/2016
DOL	NYC		FRANK BAKER		24 EDNA DRIVE SYOSSET NY 11791	05/14/2008	05/14/2013
DOL	DOL		FRANK J MERCANDO	C/O MERCANDO CONTRACTIN G CO INC	134 MURRAY AVENUE YONKERS NY 10704	11/22/2008	11/22/2013
DOL	DOL		FRANK J MERCANDO		134 MURRAY AVENUE YONKERS NY 10704	12/11/2009	12/11/2014
DOL	DOL		FRANK ORTIZ		75 SHERBROOK ROAD NORTH BABYLON NY 11704	07/01/2010	07/01/2015
DOL	DOL		FRED ABDO	ABDO TILE COMPANY AKA ABDO TILE CO	6179 EAST MOLLOY ROAD EAST SYRACUSE NY 13057	06/25/2010	07/02/2017
DOL	DOL	*****9202	G & M PAINTING ENTERPRISES INC		13915 VILLAGE LANE RIVERVIEW MI 48192	02/05/2010	02/05/2015
DOL	DOL	*****6826	GBE CONTRACTING CORPORATION		12-14 UTOPIA PARKWAY WHITESTONE NY 11357	02/10/2010	02/10/2015
DOL	NYC		GELSOMINA TASSONE		25 CLIFF STREET NEW ROCHELLE NY 10801	06/15/2010	06/15/2015
DOL	DOL		GEORGE A PATTI III		P O BOX 772 JAMESTOWN NY 14701	08/13/2010	08/13/2015
DOL	NYC		GEORGE LUCEY		150 KINGS STREET BROOKLYN NY 11231	01/19/1998	01/19/2998
DOL	DOL		GEORGE SHINAS		12-14 UTOPIA PARKWAY WHITESTONE NY 11357	02/10/2010	02/10/2015
DOL	DOL		GERALD A POLLOCK		336 TOMPKINS STREET CORTLAND NY 13045	06/29/2010	07/15/2016
DOL	DOL		GERALD F POLUCH JR		2085 BRIGHTON HENRIETTA TOWN LINE ROADROCHESTER NY 14623	11/04/2010	11/04/2015
DOL	AG		GERARD IPPOLITO		563 MUNCEY ROAD WEST ISLIP NY 11795	07/14/2008	07/14/2013
DOL	DOL	*****1075	GLOBAL TANK CONSTRUCTION LLC		P O BOX 1238 SALINA OK 74365	11/28/2012	11/28/2017

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DOL	DOL	*****4013	GR GRATES CONSTRUCTION CORPORATION		63 IRONWOOD ROAD UTICA NY 13520	06/14/2010	06/14/2015
DOL	DOL		GRATES MERCHANT NANNA INC		63 IRONWOOD ROAD UTICA NY 13520	06/14/2010	06/15/2015
DOL	DOL		GREGG G GRATES		63 IRONWOOD ROAD UTICA NY 13520	06/14/2010	06/14/2015
DOL	DOL		GRETCHEN SULLIVAN		P O BOX 130 CRETE IL 60417	11/10/2011	11/10/2016
DOL	DOL	*****9985	GROUND LEVEL CONSTRUCTION		10 GABY LANE CHEEKTOWAGA NY 14227	10/15/2009	10/15/2014
DOL	DOL	*****7735	GRYF CONSTRUCTION INC		394 SPOTSWOOD-ENGLISH RD MONROE NJ 08831	08/08/2011	08/08/2016
DOL	DOL		GUS PAPASTEFANOU		C/O D & G PAINTING & DECO 53 LITTLE COLLABAR ROADMONTGOMERY NY 12549	04/19/2012	04/19/2017
DOL	DOL		H.H. RAUH CONSTRUCTION, LLC		2930 RT. 394 ASHVILLE NY 14710	01/14/2011	01/14/2016
DOL	DOL	*****2499	H.H. RAUH CONTRACTING CO., LLC		2930 RT. 394 ASHVILLE NY 14710	01/14/2011	01/14/2016
DOL	DOL		H.H. RAUH PAVING, INC.		7 WEST 1ST ST. LAKEWOOD NY 14750	01/14/2011	01/14/2016
DOL	DOL	*****8904	HALLOCKS CONSTRUCTION CORP	P O BOX 278	YORKTOWN HEIGHTS NY 10598	12/01/2008	12/01/2013
DOL	DOL		HARALAMBOS KARAS		80-12 ASTORIA BOULEVARD EAST ELMHURST NY 11370	11/22/2008	10/22/2013
DOL	DOL	*****5405	HARD LINE CONTRACTING INC		89 EDISON AVENUE MOUNT VERNON NY 10550	10/28/2011	10/28/2016
DOL	DOL		HI-TECH CONTRACTING CORP		114 PEARL STREET PORT CHESTER NY 10573	08/15/2012	08/15/2017
DOL	DOL	*****4331	HIDDEN VALLEY EXCAVATING INC		225 SEYMOUR STREET FREDONIA NY 14063	02/08/2011	02/08/2016
DOL	DOL	*****9893	HOXIE'S PAINTING CO INC		2219 VALLEY DRIVE SYRACUSE NY 13207	12/04/2009	12/04/2014
DOL	DOL	*****6429	IDM ENTERPRISES INC		60 OUTWATER LANE GARFIELD NJ 07026	05/09/2009	05/09/2014
DOL	DOL	*****8426	IMPERIAL MASONRY RESTORATION INC		141 ARGONNE DRIVE KENMORE NY 14217	10/03/2012	10/03/2017
DOL	DOL	*****7561	INDUS GENERAL CONSTRUCTION		33-04 91ST STREET JACKSON HEIGHTS NY 11372	04/28/2010	04/28/2015
DOL	DOL	*****0488	INTERWORKS SYSTEMS, INC.		1233 WALT WHITMAN ROAD MELVILLE NY 11747	04/29/2008	04/29/2013
DOL	DA	*****1958	IRON HORSE ONE INC		10 ROSWELL AVENUE OCEANSIDE NY 11572	09/30/2010	09/30/2015
DOL	DOL		ISABEL FRAGA		C/O THREE FRIENDS CONSTR 986 MADISON AVENUEPATERSON NJ 07501	01/03/2013	01/03/2018
DOL	DOL		IVAN D MARKOVSKI		60 OUTWATER LANE GARFIELD NJ 07026	05/09/2009	05/09/2014
DOL	DOL		J & N LEASING AND BUILDING MATERIALS		154 EAST BOSTON POST ROAD MAMARONECK NY 10543	08/11/2009	08/11/2014
DOL	DOL	*****1584	J M TRI STATE TRUCKING INC		140 ARMSTRONG AVENUE SYRACUSE NY 13209	10/21/2009	10/21/2014
DOL	DOL	*****9368	J TECH CONSTRUCTION		PO BOX 64782 ROCHESTER NY 14624	09/24/2012	09/24/2017
DOL	DOL		J THE HANDYMAN			09/24/2012	09/24/2017
DOL	DOL		JAMES SICKAU		3090 SHIRLEY ROAD NORTH COLLINS NY 14111	04/19/2011	12/30/2016
DOL	DOL		JAMES WALSH		89 EDISON AVENUE MOUNT VERNON NY 10550	10/28/2011	10/28/2016
DOL	DOL		JAY PRESUTTI		C/O CONSOLIDATED INDUSTRI 2051 ROUTE 44/55MODENA NY 12548	01/28/2013	01/28/2018
DOL	DOL		JEFFREY A NANNA		502 WOODBURN DRIVE UTICA NY 13502	06/14/2010	06/14/2015
DOL	DOL		JEFFREY ARTIERI		107 STEVENS STREET LOCKPORT NY 14094	11/04/2009	11/04/2014
DOL	DOL		JOHN BUONADONNA		283 NORTH MIDDLETOWN ROAD PEARL RIVER NY 10965	09/28/2009	09/28/2014
DOL	DOL		JOHN CATONE		C/O CATONE CONSTRUCTION 294 ALPINE ROADROCHESTER NY 14612	03/09/2012	03/09/2017

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DOL	NYC		JOHN DITURI		1107 MCDONALD AVENUE BROOKLYN NY 11230	07/30/2010	07/30/2015
DOL	NYC		JOHN FICARELLI		120-30 28TH AVENUE FLUSHING NY 11354	01/14/2011	01/14/2016
DOL	DOL		JOHN H LEE	JOHN LEE QUALITY PAVING	67 WILER ROAD HILTON NY 14468	01/28/2013	01/28/2018
DOL	DOL		JOHN JIULIANNI		222 GAINSBORG AVENUE E WEST HARRISON NY 10604	05/10/2010	05/10/2015
DOL	DOL	*****1749	JOHN LEE QUALITY PAVING		67 WILER ROAD HILTON NY 14468	01/28/2013	01/28/2018
DOL	NYC		JOHN MARI JR		278 ROBINSON AVENUE NEW YORK NY 10312	04/06/2008	04/06/2013
DOL	DOL	*****2701	JOHN SMYKLA	AFFORDABLE PAINTING PLUS	367 GREEVES ROAD NEW HAMPTON NY 10958	10/01/2010	10/01/2015
DOL	DOL	*****9368	JORGE I DELEON	J TECH CONSTRUCTI ON	PO BOX 64782 ROCHESTER NY 14624	09/24/2012	09/24/2017
DOL	DOL		JORGE OUVINA		344 SOUNDVIEW LANE COLLEGE POINT NY 11356	11/22/2011	11/22/2016
DOL	DOL		JOSE DOS SANTOS JR		85-08 60TH AVENUE ELMHURST NY 11373	11/21/2008	11/21/2013
DOL	DOL		JOSE MONTAS		27 BUTLER PLACE YONKERS NY 10710	03/18/2011	03/15/2017
DOL	DOL		JOSEPH CASUCCI		6820 14TH AVENUE BROOKLYN NY 11219	10/27/2011	10/27/2016
DOL	DOL		JOSEPH MONETTE		C/O JOHN MONETTE 140 ARMSTRONG AVENUESYRACUSE NY 13209	10/21/2009	10/21/2014
DOL	DOL	*****1763	JR RESTORATION & ROOFING INC		152-65 11TH AVENUE WHITESTONE NY 11357	05/22/2008	05/22/2013
DOL	DOL		JULIUS AND GITA BEHREND		5 EMES LANE MONSEY NY 10952	11/20/2002	11/20/3002
DOL	DOL		K NELSON SACKOOR		16 JOY DRIVE NEW HYDE PARK NY 11040	01/05/2010	01/05/2015
DOL	NYC		KAMIL OZTURK		3715 KINGS HWY - STE 1D BROOKLYN NY 11234	06/30/2010	06/30/2015
DOL	DOL		KEMPTON MCINTOSH		8531 AVENUE B BROOKLYN NY 11236	12/16/2008	12/16/2013
DOL	DOL		KEN DEAVER		731 WARWICK TURNPIKE HEWITT NJ 07421	06/25/2012	12/11/2017
DOL	DOL	*****5941	KINGSVIEW ENTERPRISES INC		7 W FIRST STREET P O BOX 2LAKEWOOD NY 14750	01/14/2011	01/14/2016
DOL	DOL		KRZYSZTOF PRXYBYL		2 TINA LANE HOPEWELL JUNCTION NY 12533	01/06/2012	01/06/2017
DOL	DOL	*****6033	KUSNIR CONSTRUCTION		2677 ANAWALK ROAD KATONAH NY 10536	08/03/2012	08/03/2017
DOL	DOL	*****0526	LAGUARDIA CONSTRUCTION CORP		47-40 48TH STREET WOODSIDE NY 11377	07/01/2011	07/01/2016
DOL	NYC	*****8816	LAKE CONSTRUCTION AND DEVELOPMENT CORPORATION		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL	*****9628	LANCET ARCH INC		112 HUDSON AVENUE ROCHESTER NY 14605	02/14/2006	10/19/2014
DOL	DOL		LANCET SPECIALTY CONTRACTING CORP		C/O CATENARY CONSTRUCTION 112 HUDSON AVENUEROCHESTER NY 14605	10/19/2009	10/19/2014
DOL	DOL		LARRY DOMINGUEZ		114 PEARL STREET PORT CHESTER NY 10573	08/15/2012	08/15/2017
DOL	DOL		LARRY FRANGOS		5752 WEST WEBB ROAD YOUNGSTOWN OH 44515	05/21/2008	05/21/2013
DOL	DOL		LAURA A. GAUTHIER		C/O IMPERIAL MASONRY REST 141 ARGONNE DRIVEKENMORE NY 14217	10/03/2012	10/03/2017
DOL	DOL	*****0597	LEED INDUSTRIES CORP	HI-TECH CONTRACTIN G CORP	114 PEART STREET PORT CHESTER NY 10573	08/15/2012	08/15/2017
DOL	DOL	*****7907	LEEMA EXCAVATING INC		140 ARMSTRONG AVENUE SYRACUSE NY 13209	10/21/2009	10/21/2014
DOL	AG	*****5102	LIBERTY TREE SERVICE, INC.		563 MUNCEY ROAD WEST ISLIP NY 11795	07/14/2008	07/14/2013
DOL	DOL	*****8453	LINPHILL ELECTRICAL CONTRACTORS INC		523 SOUTH 10TH AVENUE MOUNT VERNON NY 10553	01/07/2011	01/07/2016

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DOL	DOL		LINVAL BROWN		523 SOUTH 10TH AVENUE MOUNT VERNON NY 10553	01/07/2011	01/07/2016
DOL	DOL	*****5171	LUVIN CONSTRUCTION CORP		P O BOX 357 CARLE PLACE NY 11514	03/15/2010	03/15/2015
DOL	DOL		MANUEL ESTEVES		55 OLD TURNPIKE ROAD SUITE 612NANUET NY 10954	02/04/2011	02/04/2016
DOL	NYC		MANUEL P TOBIO		150 KINGS STREET BROOKLYN NY 14444	08/19/1998	08/19/2998
DOL	NYC		MANUEL TOBIO		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL		MAR CONTRACTING CORP		620 COMMERCE STREET THORNWOOD NY 10594	09/24/2012	09/24/2017
DOL	DOL		MARGARET FORTH		P O BOX 74 EAST GREENBUSH NY 12061	02/28/2012	10/01/2017
DOL	DOL		MARIA ESTEVES AKA MARIA MARTINS		C/O THREE FRIENDS CONSTR 986 MADISON AVENUEPATERSON NJ 07501	01/03/2013	01/03/2018
DOL	DOL		MARIA MARTINS AKA MARIA ESTEVES		C/O THREE FRIENDS CONSTR 986 MADISON AVENUEPATERSON NJ 07501	01/03/2013	01/03/2018
DOL	DOL		MARIO LUIS		31 DURANT AVENUE BETHEL CT 06801	07/02/2012	07/02/2017
DOL	DOL		MARIO R ECHEVERRIA JR		588 MEACHAM AVE-SUITE 103 ELMONT NY 11003	08/24/2010	08/24/2015
DOL	DOL		MARK LINDSLEY		355 COUNTY ROUTE 8 FULTON NY 13069	08/08/2009	08/14/2014
DOL	NYC	*****4314	MASCON RESTORATION INC		129-06 18TH AVENUE COLLEGE POINT NY 11356	02/09/2012	02/09/2017
DOL	NYC	*****4314	MASCON RESTORATION LLC		129-06 18TH AVENUE COLLEGE POINT NY 11356	02/09/2012	02/09/2017
DOL	DOL	*****0845	MASONRY CONSTRUCTION INC		442 ARMONK ROAD MOUNT KISCO NY 10549	12/04/2009	05/04/2017
DOL	DOL	*****3333	MASONRY INDUSTRIES INC		442 ARMONK ROAD MOUNT KISCO NY 10549	12/04/2009	05/04/2017
DOL	DOL	*****6826	MATSOS CONTRACTING CORPORATION		12-14 UTOPIA PARKWAY WHITESTONE NY 11357	02/10/2010	02/10/2015
DOL	AG	*****9970	MAY CONSTRUCTION CO INC		700 SUMMER STREET STAMFORD CT	11/24/2009	11/24/2014
DOL	DOL	*****9857	MBL CONTRACTING CORPORATION		2620 ST RAYMOND AVENUE BRONX NY 10461	08/30/2011	08/30/2016
DOL	DOL		MCI CONSTRUCTION INC		975 OLD MEDFORD AVENUE FARMINGDALE NY 11738	08/24/2009	08/24/2014
DOL	DOL	*****9028	MCINTOSH INTERIORS LLC		8531 AVENUE B BROOKLYN NY 11236	02/05/2013	02/05/2018
DOL	DOL	*****5936	MCSI ADVANCED AV SOLUTIONS LLC		2085 BRIGHTON HENRIETTA TOWN LINE ROADROCHESTER NY 14623	11/04/2010	11/04/2015
DOL	DOL	*****4259	MERCANDO CONTRACTING CO INC		134 MURRAY AVENUE YONKERS NY 10704	12/11/2009	12/11/2014
DOL	DOL	*****0327	MERCANDO INDUSTRIES LLC		134 MURRAY AVENUE YONKERS NY 10704	12/11/2009	12/11/2014
DOL	DOL	*****9198	MICHAEL CZECHOWICZ	OCTAGON CO	37-11 35TH AVENUE-2ND FL LONG ISLAND CITY NY 11101	01/08/2013	01/08/2018
DOL	DOL	*****6033	MICHAEL KUSNIR	KUSNIR CONSTRUCTION	2677 ANAWALK ROAD KATONAH NY 10536	08/03/2012	08/03/2017
DOL	DOL		MICHAEL MARGOLIN		4 LEGHORN COURT NEW YORK NY 11746	11/28/2012	11/28/2017
DOL	DOL	*****2635	MIDLAND CONSTRUCTION OF CEDAR LAKE INC		13216 CALUMET AVENUE CEDAR LAKE IL 46303	11/10/2011	11/10/2016
DOL	DOL	*****5517	MILLENNIUM PAINTING INC		67 WARD ROAD SALT POINT NY 12578	01/21/2011	01/21/2016
DOL	NYC		MOHAMMAD SELIM		73-12 35TH AVE - APT F63 JACKSON HEIGHTS NY 11372	03/04/2010	03/04/2015
DOL	DA		MOHAMMED SALEEM		768 LYDIG AVENUE BRONX NY 10462	08/18/2009	05/25/2015
DOL	NYC	*****2690	MONDOL CONSTRUCTION INC		11-27 30TH DRIVE LONG ISLAND CITY NY 11102	05/25/2011	05/25/2016
DOL	DOL		MORTON LEVITIN		3506 BAYFIELD BOULEVARD OCEANSIDE NY 11572	08/30/2011	08/30/2016
DOL	DOL	*****2737	MOUNTAIN'S AIR INC		2471 OCEAN AVENUE- STE 7A BROOKLYN NY 11229	09/24/2012	09/24/2017
DOL	NYC		MUHAMMAD ZULFIQAR		129-06 18TH AVENUE COLLEGE POINT NY 11356	02/09/2012	02/09/2017
DOL	DOL	*****2357	MUNICIPAL MILLING & MIX-IN-PLACE		9091 ERIE ROAD ANGOLA NY 14006	02/03/2011	02/03/2016

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DOL	DOL		MURRAY FORTH		P O BOX 74 EAST GREENBUSH NY 12061	02/28/2012	10/01/2017
DOL	DA	*****9642	MUTUAL OF AMERICAL GENERAL CONSTRUCTION & MANAGEMENT CORP		768 LYDIG AVENUE BRONX NY 10462	08/18/2009	05/25/2015
DOL	DOL		MUZAFFAR HUSSAIN		C/O ABSOLUTE GENERAL CONT 1129 AVENUE UBROOKLYN NY 11229	01/28/2013	01/28/2018
DOL	DOL		N PICCO AND SONS CONTRACTING INC		154 EAST BOSTON POST ROAD MAMARONECK NY 10543	08/11/2009	08/11/2014
DOL	DOL	*****4133	NASDA ELECTRICAL ENTERPRISES INC		134-25 166 PLACE - #5E JAMAICA NY 11434	08/07/2008	08/07/2013
DOL	DOL	*****9445	NASDA ENTERPRISES INC		134-25 166 PLACE #5E JAMAICA NY 11434	08/07/2008	08/07/2013
DOL	DOL		NAT PICCO		154 EAST BOSTON POST ROAD MAMARONECK NY 10543	08/22/2009	08/22/2014
DOL	DA	*****6988	NEW YORK INSULATION INC		58-48 59TH STREET MASPETH NY 11378	05/16/2012	05/16/2017
DOL	DOL		NICOLE SPELLMAN		2081 JACKSON AVENUE COPIAGUE NY 11726	06/03/2010	06/03/2015
DOL	DOL		NIKOLAS PSAREAS		656 N WELLWOOD AVE/STE C LINDENHURST NY 11757	09/01/2011	09/01/2016
DOL	DOL	*****7041	NYCOM SERVICES CORP		80-12 ASTORIA BOULEVARD EAST ELMHURST NY 11370	11/22/2008	11/22/2013
DOL	DOL	*****0797	O GLOBO CONSTRUCTION CORP		85-06 60TH AVENUE ELMHURST NY 11373	11/21/2008	11/21/2013
DOL	DOL	*****9198	OCTAGON CO		37-11 35TH AVENUE-2ND FL LONG ISLAND CITY NY 11101	01/08/2013	01/08/2018
DOL	DOL		OKBY ELSAYED		1541 EAST 56TH STREET BROOKLYN NY 11234	05/04/2012	05/04/2017
DOL	NYC		OLIVER HOLGUIN		95-26 76TH STREET OZONE PARK NY 11416	10/12/2011	10/12/2016
DOL	NYC	*****3855	OT & T INC		36-28 23RD STREET LONG ISLAND CITY NY 11106	01/15/2008	05/14/2013
DOL	DOL	*****5226	PASCARELLA & SONS		459 EVERDALE AVENUE WEST ISLIP NY 11759	01/10/2010	01/10/2015
DOL	DOL		PATRICK BURNS		19 E. CAYUGA STREET OSWEGO NY 13126	05/15/2008	05/15/2013
DOL	DOL		PATRICK SHAUGHNESSY		88 REDWOOD DRIVE ROCHESTER NY 14617	05/16/2008	05/16/2013
DOL	DOL		PAUL VERNA		C/O AMERICAN STEEL MECHA 693 PAINTER STREETMEDIA PA 19063	02/20/2013	02/20/2018
DOL	DOL		PEDRO RINCON		131 MELROSE STREET BROOKLYN NY 11206	03/02/2010	03/02/2015
DOL	DOL	*****9569	PERFORM CONCRETE INC		31 DURANT AVENUE BETHEL CT 06801	07/02/2012	07/02/2017
DOL	DOL		PETER J LANDI		249 MAIN STREET EASTCHESTER NY 10709	10/05/2009	10/05/2014
DOL	DOL	*****7229	PETER J LANDI INC		249 MAIN STREET EASTCHESTER NY 10709	10/05/2009	10/05/2014
DOL	DOL	*****1136	PHOENIX ELECTRICIANS COMPANY INC		540 BROADWAY P O BOX 22222ALBANY NY 12201	03/09/2010	03/09/2015
DOL	DOL	*****5419	PINE VALLEY LANDSCAPE CORP		RR 1, BOX 285-B BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL		PRECISION DEVELOPMENT CORP		115 LEWIS STREET YONKERS NY 10703	05/12/2009	05/12/2014
DOL	DOL	*****7914	PRECISION SITE DEVELOPMENT INC		89 EDISON AVENUE MOUNT VERNON NY 10550	10/28/2011	10/28/2016
DOL	DOL	*****9359	PRECISION STEEL ERECTORS INC		P O BOX 949 BREWERTON NY 13029	09/02/2008	09/02/2013
DOL	DOL	*****6895	PROLINE CONCRETE OF WNY INC		3090 SHIRLEY ROAD NORTH COLLINS NY 14111	04/19/2011	12/30/2016
DOL	DOL	*****2326	PUTMAN CONSTRUCTION COMPANY OF WESTERN NY		29 PHYLLIS AVENUE BUFFALO NY 14215	09/03/2008	09/03/2013
DOL	DOL		RAMON BONILLA		938 E 232ND STREET #2 BRONX NY 10466	05/25/2010	05/25/2015
DOL	DOL	*****7294	REDWOOD FLOORING, INC.		88 REDWOOD DRIVE ROCHESTER NY 14617	05/16/2008	05/16/2013
DOL	NYC	*****6978	RISINGTECH INC		243-03 137TH AVENUE ROSEDALE NY 11422	03/25/2010	03/25/2015
DOL	DOL		ROBBYE BISSEAR		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	01/11/2003	01/11/3003

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DOL	DOL		ROBERT DIMARSICO		1233 WALT WHITMAN ROAD MELVILLE NY 11747	04/29/2008	04/29/2013
DOL	NYC		ROBERT FICARELLI		120-30 28TH AVENUE FLUSHING NY 11354	01/14/2011	01/14/2016
DOL	DOL	*****1721	ROBERTS CONSTRUCTION OF UPSTATE NEW YORK INC		5 SANGER AVENUE NEW HARTFORD NY 13413	01/28/2009	01/28/2014
DOL	DOL		ROCCO ESPOSITO		C/O ROCMAR CONTRACTING CO 620 COMMERCE STREET THORNWOOD NY 10594	09/24/2012	09/24/2017
DOL	DOL		ROCMAR CONSTRUCTION CORP		620 COMMERCE STREET THORNWOOD NY 10594	09/24/2012	09/24/2017
DOL	DOL	*****7083	ROCMAR CONTRACTING CORP		620 COMMERCE STREET THORNWOOD NY 10594	09/24/2012	09/24/2017
DOL	DOL	*****9025	ROJO MECHANICAL LLC		938 E 232ND STREET #2 BRONX NY 10466	05/25/2010	05/25/2015
DOL	DOL		RONALD R SAVOY	C/O CNY MECHANICAL ASSOCIATES INC	P O BOX 250 EAST SYRACUSE NY 13057	11/06/2008	11/06/2013
DOL	DOL	*****5905	ROSE PAINTING CORP		222 GAINSBORG AVENUE EAST WEST HARRISON NY 10604	05/10/2010	05/10/2015
DOL	DOL		ROSEANNE CANTISANI		11 TATAMUCK ROAD POUND RIDGE NY 10576	05/04/2012	05/04/2017
DOL	NYC		ROSS J HOLLAND		120-30 28TH AVENUE FLUSHING NY 11354	01/14/2011	01/14/2016
DOL	DOL		RUTH H SUTTON		939 GROVESIDE ROAD BUSKIRK NY 12028	08/27/2008	08/27/2013
DOL	DOL		S & M CONTRACTING LLC		30 MIDLAND AVENUE WALLINGTON NJ 07057	11/05/2010	11/05/2015
DOL	DOL	*****2585	S B WATERPROOFING INC		SUITE #3R 2167 CONEY ISLAND AVENUE BROOKLYN NY 11223	11/04/2009	11/04/2014
DOL	DOL	*****9066	SAMAR PAINTING & DECORATING INC		137 E MAIN STREET ELMSFORD NY 10523	12/01/2008	12/01/2013
DOL	DOL	*****4923	SCHENLEY CONSTRUCTION INC		731 WARWICK TURNPIKE HEWITT NJ 07421	06/25/2012	12/11/2017
DOL	DOL		SCOTT LEONARD	GLOBAL TANK CONSTRUCTI ON LLC	P O BOX 1238 SALINA OK 74365	11/28/2012	11/28/2017
DOL	NYC	*****4020	SERVI-TEK ELEVATOR CORP		2546 EAST TREMONT AVENUE BRONX NY 10461	06/04/2009	06/04/2014
DOL	DOL	*****3540	SEVEN STAR ELECTRICAL CONTRACTING CORP		23-24 STEINWAY STREET ASTORIA NY 11105	06/27/2011	06/27/2016
DOL	DOL		SEVEN STAR ELECTRICAL INC		C/O THEONI ATHANASIADIS 1023 COMMACK ROAD DIX HILLS NY 11746	06/27/2011	06/27/2016
DOL	NYC		SHAFIQUK ISLAM		11-27 30TH DRIVE LONG ISLAND CITY NY 11102	05/25/2011	05/25/2016
DOL	NYC		SHAHZAD ALAM		21107 28TH AVE BAYSIDE NY 11360	07/02/2012	07/02/2017
DOL	DOL		SHAIKF YOUSUF		C/O INDUS GENERAL CONST 33-04 91ST STREET JACKSON HEIGHTS NY 11372	04/28/2010	04/28/2015
DOL	DOL	*****0256	SIERRA ERECTORS INC		79 MADISON AVE - FL 17 NEW YORK NY 10016	04/16/2009	04/16/2014
DOL	DOL	*****0415	SIGNAL CONSTRUCTION LLC		199 GRIDER STREET BUFFALO NY 14215	11/14/2006	02/25/2015
DOL	DOL	*****8469	SIGNATURE PAVING AND SEALCOATING		P O BOX 772 JAMESTOWN NY 14701	08/13/2010	08/13/2015
DOL	DOL	*****8469	SIGNATURE SEALCOATING AND STRIPING SERVICE		345 LIVINGSTON AVENUE P O BOX 772 JAMESTOWN NY 14702	04/04/2007	08/13/2015
DOL	DOL	*****0667	SNEEM CONSTRUCTION INC		43-22 42ND STREET SUNNYSIDE NY 11104	07/01/2011	07/01/2016
DOL	DOL		SPASOJE DOBRIC		61 WILLET STREET - SUITE PASSAIC NJ 07055	07/09/2010	02/23/2017
DOL	DOL	*****3539	SPOTLESS CONTRACTING	IMPACT INDUSTRIAL SERVICES INC	44 THIELLS-MT IVY ROAD POMONA NY 10970	10/14/2011	10/14/2016
DOL	DOL	*****3496	STAR INTERNATIONAL INC		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	08/11/2003	08/11/3003
DOL	DOL		STEFANIE MCKENNA		30 MIDLAND AVENUE WALLINGTON NJ 07057	11/05/2010	11/05/2015
DOL	DOL		STEPHEN BALZER		34-08 PARKWAY DRIVE BALDWIN NY 11510	07/01/2008	07/01/2013

NYSDOL Bureau of Public Work Debarment List 04/05/2013

Article 8

DOL	DOL		STEVEN CONKLIN		60 COLONIAL ROAD STILLWATER NY 12170	02/15/2011	02/15/2016
DOL	DOL	****4081	STS CONSTRUCTION OF WNY		893 EAGLE STREET BUFFALO NY 14210	06/09/2009	06/09/2014
DOL	DOL		STUART CHAITIN		634 ROUTE 303 BLAUDET NY 10913	07/26/2012	07/26/2017
DOL	DOL	****3210	SUPER SWEEP	FMS	4 LEHORN COURT NEW YORK NY 11746	11/28/2012	11/28/2017
DOL	DOL	****4293	THE J OUVINA GROUP LLC		344 SOUNDVIEW LANE COLLEGE POINT NY 11356	11/22/2011	11/22/2016
DOL	DOL	*****2070	THE UNIVERSAL GROUP OF NEW YORK INC		212 OXFORD WAY SCHENECTADY NY 12309	12/11/2012	02/20/2018
DOL	DOL		THEODORE F FAULKS		18 FIREWEED TRAIL HILTON NY 14468	06/10/2008	06/10/2013
DOL	DOL		THEONI ATHANASIADIS		C/O SEVEN STAR ELECTRICAL 23-24 STEINWAY STREETASTORIA NY 11105	06/27/2011	06/27/2016
DOL	DOL		THOMAS ASCHMONEIT		79 MADISON AVENUE - FL 17 NEW YORK NY 10016	04/16/2009	04/16/2014
DOL	DOL		THOMAS DEMARTINO		158-11 96TH STREET HOWARD BEACH NY 11414	06/25/2009	06/25/2014
DOL	DOL		THOMAS TERRANOVA		13 NEW ROAD/SUITE 1 NEWBURGH NY 12550	11/15/2010	11/15/2015
DOL	DOL	****2734	THREE FRIENDS CONSTRUCTION CORP		986 MADISON AVENUE PATERSON NJ 07501	01/03/2013	01/03/2018
DOL	NYC		TIMOTHY O'SULLIVAN		C/O SNEEM CONSTRUCTION 4322 42ND STREET SUNNYSIDE NY 11104	07/01/2011	07/01/2016
DOL	DOL		TIMOTHY P SUCH		893 EAGLE STREET BUFFALO NY 14210	06/09/2009	06/09/2014
DOL	DOL		TNT DEMOLITION AND ENVIRONMENTAL INC		355 COUNTY ROUTE 8 FULTON NY 13069	08/08/2009	08/19/2014
DOL	DOL	****3315	TOTAL DOOR SUPPLY & INSTALLATION INC		16 JOY DRIVE NEW HYDE PARK NY 11040	01/05/2010	01/05/2015
DOL	DOL	****3315	TOTAL DOOR SUPPLY & INSTALLATION INC		16 JOY DRIVE NEW HYDE PARK NY 11040	01/05/2010	01/05/2015
DOL	DOL	****8176	TOURO CONTRACTING CORP		1541 EAST 56TH STREET BROOKLYN NY 11234	05/04/2012	05/04/2017
DOL	DOL	****2357	TRAC CONSTRUCTION INC	MUNICIPAL MILLING & MIX -IN- PLACE	9091 ERIE ROAD ANGOLA NY 14006	02/03/2011	02/03/2016
DOL	DOL		TRI STATE TRUCKING INC		140 ARMSTRONG AVENUE SYRACUSE NY 13209	10/21/2009	10/21/2014
DOL	DOL	****5213	TRIAD PAINTING CO INC		656 N WELLWOOD AVE/STE C LINDENHURST NY 11757	09/01/2011	09/01/2016
DOL	DOL	****4294	TWT CONSTRUCTION COMPANY INC		13 NEW ROAD/SUITE 1 NEWBURGH NY 12550	11/15/2010	11/15/2015
DOL	DOL		ULIANO AND SONS INC		22 GRIFFEN COURT MILLER PLACE NY 11746	10/26/2010	10/26/2015
DOL	DOL	****0854	VANESSA CONSTRUCTION INC		588 MEACHAM AVE/STE 103 ELMONT NY 11003	08/24/2010	08/24/2015
DOL	DOL	****3270	VEZANDIO CONTRACTING CORP		530 BEECH STREET NEW HYDE PARK NY 11040	07/02/2012	07/02/2017
DOL	DOL		VIRGINIA L CAPONE		137 E MAIN STREET ELMSFORD NY 10523	12/01/2008	12/01/2013
DOL	NYC	****9936	VISHAL CONSTRUCTION INC		73-12 35TH AVE - APT F63 JACKSON HEIGHTS NY 11272	03/04/2010	03/04/2015
DOL	DOL	****0329	WET PAINT CO. OF OSWEGO, INC		19 E. CAYUGA STREET OSWEGO NY 13126	05/15/2008	05/15/2013
DOL	DOL	****7617	WHITE PLAINS CARPENTRY CORP		P O BOX 309 WHITE PLAINS NY 10603	12/04/2009	05/04/2017
DOL	DOL		WILLIAM PUTNAM		50 RIDGE ROAD BUFFALO NY 14215	09/03/2008	09/03/2013
DOL	DOL		WILLIAM SCRIVENS		30 MIDLAND AVENUE WALLINGTON NJ 07057	11/05/2010	11/05/2015
DOL	DOL		WILLIAM W FARMER JR		112 HUDSON AVENUE ROCHESTER NY 14605	10/19/2009	10/19/2014
DOL	NYC	****5498	XAVIER CONTRACTING LLC		68 GAYLORD ROAD SCARSDALE NY 10583	02/10/2011	02/10/2016
DOL	AG		YULY ARONSON		700 SUMMER STREET STAMFORD CT	11/24/2009	11/24/2014
DOL	DOL		YURIY IVANIN		C/O MOUNTAIN'S AIR INC 2471 OCEAN AVENUE-STE 7ABROOKLYN NY 11229	09/24/2012	09/24/2017

SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

This Work is being performed under one (1) contract as outlined in the Invitation to Bidders and in the General Requirements. It shall be expressly understood that the Contractors shall be thoroughly familiar with the General Requirements and work that pertains to these Contracts. It is further expressly understood that all bidders shall have visited the site and made themselves thoroughly familiar with the conditions of work, and the coordination required to complete the contracts as shown on the drawings and specifications.

SECTION 01000 - SPECIAL CONDITIONS

A. Coordination With Utilities

There are no known utilities at the project location. However, the Contractor shall contract Code 753 for confirmation of any utilities existing within the project limits.

It is imperative that prior to bidding, the contractor familiarize him/herself with the site and all existing conditions prior to submitting a proposal.

B. Site Access

The Contractor can access the site along East Strand Street in the City of Kingston. Please be advised that the Contractor is solely responsible for any damage to the Wastewater Treatment Facility and its appurtenances, as determined by the Owner and the Engineer.

END OF SECTION 01000

SECTION 01011 - SUMMARY OF THE WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this section.

1.02 PROJECT/WORK IDENTIFICATION:

- A. General: Project name for General Construction is Streetscape Screen at the Wastewater Treatment Facility for the City of Kingston as shown on Contract Documents prepared by Guardia Architects.
- B. Prime Contracts, in the context used in this Section, are separate contracts that represent significant elements of work that are performed concurrently with and in close coordination with work performed on the project under other prime contractors. Prime contracts for this project include the following:
 - 1. Contract for General Construction.
- C. Contract documents indicate the work of each prime Contract and related requirements and conditions that have an impact on the project. Related requirements and conditions that are indicated on the Contract Documents include, but are not necessarily limited to, the following:
 - 1. Existing site conditions and restrictions on use of the site.
 - 2. Alterations and coordination with existing work.
- D. It shall be the responsibility of each bidder to visit and thoroughly investigate the site so as to familiarize himself with the conditions under which the work is to be carried out. Bid Proposal by Bidder shall be deemed to have taken into consideration all existing conditions. No consideration will be given to any claim submitted by a Contractor due to his failure to familiarize himself with conditions under which the work is to be executed.
- E. Every bidder will receive complete sets of Contract Documents. Each Contractor shall be responsible for familiarizing himself with the work under other contracts and shall consider such work and the coordination required in completing the entire work of the project. Each Contractor shall establish and maintain communication with other Contractors and keep apprised of all phases of the work.

1.03 SUMMARY, PRIME CONTRACT WORK

Briefly, the work of each prime contractor, as defined in greater detail by other provisions of the Contract Documents, can be summarized as follows:

- A. General Construction includes work that is primarily civil in nature plus work traditionally recognized as general construction. It includes both administration and coordination responsibilities. Work under this prime contract includes, but is not necessarily limited to, the following:

General Construction

1. **Base Bid:** All work in the plan set labeled as Base Bid on Sheets A101, A102 and A104 including:
 - The curved corner screen at the bar rack building (see Sheet A301 and others)
 - The green screen trellis at the primary settling tanks and UV disinfectant equipment (see Sheet A101 right side, A102 left side and details 7-11 on 1302 and others)
 - All landscaping, fencing and lighting work from the west entrance and bar rack building to the digester tank and including the yard in front of the digester tank. (See Sheet A101 & left half of Sheet A102 and others)
2. **Bid Addition 1:** All work in the plan set labeled as Bid Addition 1 including:
 - The steel screen, landscaping, fencing and lighting work in front of the administrative building (see Sheets A102 and A103)
3. **Bid Addition 2:** All work shown on Sheet A103 labeled as Bid Addition 2
4. **Bid Alternate (1):** The Bid Alternate shall be the Base Bid plus the work labeled as Bid Alternate 1 shown on Sheet A104 which describes repeating the details of the green screen trellis in front of the administration building. Bid Addition 1 and Bid Addition 2 are excluded from Bid Alternate (1).

1.04 PRIME CONTRACTORS USE OF PREMISES

- A. General: During the entire construction period, the Prime Contractors jointly shall have the exclusive use of the premises for construction operations, including full use of the site.

- B. Use of the Site: Confine operations at the site to the areas permitted under the Contract. Portions of the site beyond areas on which work is indicated are not to be disturbed. Conform to site rules and regulations affecting the work while engaged in project construction.

Keep existing driveways and entrances serving the premises clear and available to the Owner and his employees at all times. Do not use these areas for parking or storage of materials. This will be coordinated with the City of Kingston.

Do not unreasonably encumber the site with materials or equipment. Confine stockpiling of materials and location of storage sheds to the areas indicated. If additional storage is necessary, obtain and pay for such storage off-site.

Lock automotive type vehicles such as passenger cars and trucks and other types of mechanized and motorized construction equipment, when parked and unattended, so as to prevent unauthorized use. Do not leave such vehicles or equipment unattended with the motor running or the ignition key in place.

1.05 DIVISION OF WORK:

- A. The Contract for General Construction will include all work called for on the Drawings and Division 1, 2, & 3 of the Specifications.

Division One of the Specifications pertains to all Contracts.

END OF SECTION 01011

SECTION 01025 - BID ADDITION/BID ALTERNATE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of contract, including General and Supplementary Conditions and Division 1 specifications sections, apply to work of this Section.
- B. Coordinate allowance work with related work to ensure that each selection is completely integrated and interfaced with related work.

1.02 DESCRIPTION OF REQUIREMENTS:

- A. Definitions and Explanations: Certain requirements of the work related to the Bid Addition are shown and specified in contract documents. The bid addition has been established to allow this work to be paid for on both unit price and lump sum basis.

Lump Sum prices include all necessary material, overhead, profit and applicable taxes.

- B. Type of bid addition scheduled herein for the work includes the following:

To Be Determined.

1.03 SUBMITTALS:

- A. Payment for work performed under this Section will be paid on a lump sum basis on additional work as directed by the Engineer.
- B. At project closeout, payment of Bid Addition will be by Change Order.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 SCHEDULE OF BID ADDITION/BID ALTERNATE:

- A. General Contractor
 - 1. **Refer to Summary of Work Section 01011 - Page 01011-2 and project plans for description of Bid Addition and Bid Alternate Items.**

END OF SECTION 01025

SECTION 01040 - PROJECT COORDINATION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 SUMMARY:

- A. This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:

Coordination.
Administrative and supervisory personnel.
General installation provisions.
Cleaning and protection.

- B. Progress meetings, coordination meetings and pre-installation conferences are included in Section "Project Meetings".

- C. Requirements for the Contractor's Construction Schedule are included in Section "Submittals".

1.03 COORDINATION:

- A. Coordination: Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operations.

Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.

Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.

Make adequate provisions to accommodate items scheduled for later installation.

Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports,

and attendance at meetings.

Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.

- B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

Preparation of schedules.
Installation and removal of temporary facilities.
Delivery and processing of submittals.
Progress meetings.
Project Close-out activities.

- C. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work. Refer to other sections for disposition of salvaged materials that are designated as Owner's property.

1.04 SUBMITTALS:

- A. Coordination Drawings: Prepare and submit coordination Drawings where close and careful coordination is required for installation of products and materials fabricated off-site by separate entities, and where limited space availability necessitates maximum utilization of space for efficient installation of different components.

Show the interrelationship of components shown on separate Shop Drawings.

Indicate required installation sequences.

Comply with requirements contained in Section "Submittals".

- B. Staff Names: Within 15 days of Notice to Proceed, submit a list of the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site; identify individuals, their duties and responsibilities; list their addresses and telephone numbers.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 CLEANING AND PROTECTION:

- A. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

- B. Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

- Excessive static or dynamic loading.
- Excessively high or low temperatures.
- Excessively high or low humidity.
- Water or ice.
- Solvents.
- Chemicals.
- Puncture.
- Abrasion.
- Heavy traffic.
- Soiling.
- Combustion.
- Misalignment.
- Excessive weathering.
- Unprotected storage.
- Improper shipping or handling.
- Theft.
- Vandalism.

END OF SECTION 01040

SECTION 01050 - FIELD ENGINEERING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to this section.

1.02 SUMMARY:

- A. General: This Section specifies administrative and procedural requirements for field engineering services, including, but not necessarily limited to, the following:

Construction Survey Work.

1.03 SUBMITTALS:

- A. Project Record Documents: Submit a record of Work performed and record survey data as required under provisions of Sections "Submittals" and "Project Closeout".

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 EXAMINATION:

- A. The Owner will identify existing control points, bench marks and property line corner stakes.
- B. The Contractor shall verify layout information shown on the Drawings, in relation to the survey control points and existing benchmarks before proceeding to layout the Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.

Do not change or relocate benchmarks or control points without prior written approval. Promptly report lost or destroyed referenced points, or requirements to relocate reference

points because of necessary changes in grades or locations.

Promptly replace lost or destroyed project control points. Base replacements on the original survey control points.

Establish and maintain permanent benchmarks on the site, referenced to data established by survey control points.

Record benchmark locations, with horizontal and vertical data, on Project Record Documents.

- B. Existing utilities and equipment: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction.

Prior to construction, verify the location and invert elevation at points of connection of storm sewer.

3.02 PERFORMANCE:

- A. Working from lines and levels established by the control survey, establish benchmarks and markers to set lines and grade at each phase of construction and elsewhere as needed to properly locate each element of the Project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale Drawings to determine dimensions.

Advise entities engaged in construction activities, of marked lines and levels provided for their use.

As construction proceeds, check every major element for line and grade.

- B. Surveyor's Log: Maintain a surveyor's log of control and other survey work. Make this log available for reference.

Record deviation from required lines and levels, and advise the Engineer when deviations that exceed indicated or recognized tolerances are detected. On Project Record Drawings, record deviations that are accepted and not corrected.

- C. Site Improvements: Locate and lay out site improvements, including pavements, stakes for grading, fill and topsoil placement, utility slopes and invert elevations by instrumentation and similar appropriate means.

- D. Existing Utilities: Furnish information necessary to adjust, move or relocate existing structures, utility poles, lines, services or other appurtenances located in, or affected by construction. Coordinate with local authorities having jurisdiction.

END OF SECTION 01050

SECTION 01210 - ALLOWANCES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes administrative and procedural requirements governing allowances.
 - 1. Certain requirements of the work related to the allowance are shown and specified in contract documents. The allowance has been established in lieu of additional requirements for that work, and further requirements thereof (if any) will be issued by change order.
- B. Types of allowances include the following:
 - 1. Contingency allowances.
- C. Related Sections include the following:
 - 1. Division 1 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.03 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Engineer for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and overhead and profit margins as per Article 7 of the Supplemental General Conditions.
- C. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

PART 2 - EXECUTION

2.01 SCHEDULE OF ALLOWANCES

- A. Allowance No. 1: The General Contractor shall include in his Contract Price Bid a lump sum allowance of \$10,000.00 for any additional field work not included in the Base Bid.

END OF SECTION

SECTION 01310 - SCHEDULES, REPORTS, PAYMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.02 COORDINATION:

- A. Coordinate both the listing and timing of reports and other activities required by provisions of this and other sections, so as to provide consistency and logical coordination between the reports. Maintain coordination and correlation between separate reports by updating at monthly or shorter time intervals. Make appropriate distribution of each report and updated report to all parties involved in the work including the Engineer and Owner. In particular, provide close coordination of the progress schedule, schedule of values, listing of subcontracts, schedule of submittals, progress reports, and payment requests.

1.03 PRELIMINARY PROGRESS SCHEDULE:

- A. Bar-Chart Schedule: Submit a bar-chart type progress schedule not more than 7 days after the date established for commencement of the work. On the schedule, indicate a time bar for each major category or unit of work to be performed at the site, properly sequenced and coordinated with other elements of work. Show completion of the work sufficiently in advance of the date established for substantial completion of the work.
1. Superimpose an S-curve, on the schedule to show the "estimated" total dollar-volume of work performed at any date during the Contract Time, with a column of cost figures in the left hand margin ranging from zero to the Contract Sum.
 2. Submittal Tabulation: With the bar-chart submittal, submit a tabulation, by date, of the submittals required during the first 90 days of Construction Time. This tabulation shall include both those submittals required during the initial 90 days of construction to maintain the orderly progression of the work, and those submittals required early because of long lead time for manufacture or fabrication. At the Contractor's option, submittal dates may be shown on the bar-chart schedule, in lieu of being tabulated.

1.04 FULLY-DEVELOPED PROGRESS SCHEDULE:

- A. Bar-Chart Schedule: Based on the preliminary development of the progress schedule, if any, and on whatever updating and feedback may have occurred during the project start-up, secure critical time commitments for performing major elements of the work. Within 60 days of

the date established for "commencement of the work", submit a comprehensive bar-chart type progress schedule indicating, by stage-coded symbols, a time bar for each major category or unit of work to be performed at the site; include minor elements of work which are, nevertheless, involved in overall sequencing of the work. Arrange schedule to show graphically the major sequences of work necessary for the completion of related elements of work. Arrange the schedule to show how substantial completion is scheduled to allow for the Engineer's procedure for certification of substantial completion. Prepare and maintain the schedule on either a sheet of sufficient width (or else a series of sheets) to show the required data clearly for the entire Construction Time. Prepare the schedule on sheets of stable transparency, or other reproducible material, to permit reproduction for the required distribution.

- B. Cost Correlation: Immediately below the date line at the heading of the bar-chart, provide a two item cost correlation line, indicating both "precalculated" and "actual" costs. This cost correlation line shall show dollar-volume of work performed as of the same dates used for preparation of payment requests. Refer to subsequent article for cost reporting and payment procedures. In so far as it is practical to do so, use the same units of work in the progress schedule as indicated in the "schedule of values" required by the General Conditions and further specified herein.

Superimpose an S-curve on the schedule (only first sheet for multiple-sheet schedule) to show the "precalculated" dollar-volume against time at any point during Contract Time. Provide a double column of figures in left hand margin; one column shall indicate a range from zero dollars to the Contract Sum, the other column shall indicate a percentage from zero to 100 percent. As the work progresses, and on each date used in payment requests, plot a second S-curve showing actual dollar-volume of work performed.

- C. Distribution: Following the initial submittal to and response by the Engineer, print and distribute progress schedules to the Engineer (3 copies), Owner, separate contractors, the principal subcontractors and suppliers or fabricators, and others with a need-to-know schedule-compliance requirement. Post copies in the project meeting room and temporary field office. When revisions are made, distribute updated issues to the same entities and post updated issues in the same locations. Delete entities from distribution when they have completed their assigned work and are no longer involved in the performance of scheduled work.

1.05 SCHEDULE OF VALUES:

- A. General: Prepare the schedule of values, as required by the General Conditions, in conjunction with the preparation of the progress schedule. Coordinate preparation of schedule of values and progress schedule. Correlate line items with other administrative schedules and the forms required for the work, including the progress schedule, payment request form, listing of subcontractors, schedule of allowances, schedule of alternates, listing

of products and principal suppliers and fabricators, and the schedule of submittals. Provide breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of payment requests and progress reports. Break down principal subcontract amounts into several line items. Round off to the nearest whole dollar, but with the total equal to the Contract Sum.

1. Material/Fabrication Values: For each unit of work where payment requests will be made on account of materials or equipment purchased, fabricated, or delivered, but not yet installed, show the "initial value" for the payment request and "value added" for subsequent stage or stages of completion on that unit of work.
2. Time Coordination: In coordination of initial submittals and other administrative "start-up" activities, submit the schedule of values to the Engineer at the earliest feasible date, but in no case later than 7 days before initial payment request is to be submitted.
3. Listing: Arrange the schedule with columns to indicate the generic name of item, related specification sections, the subcontractor, the supplier, manufacturer or fabricator, change orders (numbers) which have affected the value, the dollar value of the item, and the percentage of the Contract Sum to the nearest one-hundredth percent and adjusted to the total 100 percent.
4. Margins of Cost: Show line item of indirect costs, and margins on actual costs, only to the extent such items will be individually listed in payment requests. In general, each item in the schedule of values and in payment requests shall be established to be complete with its total expenses and proportionate share of the general overhead and profit margin. Except as otherwise indicated, those major cost items that are not directly the cost of actual work-in-place, such as distinct temporary facilities, may be either shown as line items in the schedule of values or may be distributed as general overhead expense, at Contractor's option.
5. Schedule Updating: Update and resubmit schedule of values when change orders affect the listing and when the actual performance of the work involves necessary changes of substance to the values previously listed.

1.06 PAYMENT REQUESTS:

- A. General: Except as otherwise indicated, the progress payment cycle is to be regular. Each application must be consistent with previous applications and payments. Certain applications for payment, such as the initial application, the application at substantial completion, and the final payment application, involve additional requirements.
- B. Payment Application Times: The "date" for each progress "payment" is as indicated in

Owner-Contractor Agreement or, if none is indicated therein, it is the 15th day of each month. The period of construction work covered by each payment request is period indicated in Owner-Contractor Agreement or, if none is indicated therein, it is period ending 15 days prior to date for each progress payment, and starting day following end of preceding period.

- C. Payment Application Forms: AIA Document G702 and Continuation Sheets; available from "Publications, a Division of the AIA Service Corporation", 1735 New York Avenue, NW, Washington DC 20006 (also available at most local AIA chapter offices).
- D. Application Preparation: Except as otherwise indicated, complete every entry provided for on the form, including notarization and execution by authorized persons. Incomplete applications will be returned by Engineer without action. Entries must match current data of schedule of values and progress schedule and report. Listing must include amounts of change orders issued prior to last day of the "period of construction" covered by the application.
- D. Initial Payment Application: The principal administrative actions and submittals which must precede or coincide with submittal of Contractor's first payment application can be summarized as follows, but not necessarily by way of limitation:
- Listing of subcontractors and principal suppliers and fabricators.
 - Schedule of values.
 - Progress schedule (preliminary if not final).
 - Schedule of principal products.
 - Schedule of submittals (preliminary if not final).
 - Listing of Contractor's staff assignments and principal consultants.
 - Copies of acquired building permits and similar authorizations and licenses from governing authorities for current performance of the work.
 - Performance and/or payment bonds.
- E. Application at Time of Substantial Completion: Following issuance of Engineer's final "certificate of substantial completion", and also in part as applicable to prior certificates on portions of completed work as designated, a "special" payment application may be prepared and submitted by Contractor. The principal administrative actions and submittals which must proceed or coincide with such special applications can be summarized as follows, but not necessarily by way of limitation:

Warranties (guarantees) maintenance agreements and similar provisions of contract documents.

Final cleaning of the work.

Application for reduction (if any) of retainage, and consent of surety.

Advise to Owner on coordination of shifting insurance coverages, including proof of extended coverages as required.

Listing of Contractor's incomplete work, recognized as exceptions to Engineer's certificate of substantial completion.

Final Payment Application: The administrative actions and submittals which must precede or coincide with submittal of contractor's final payment application can be summarized as follows, but not necessarily by way of limitation:

Completion of project closeout requirements.

Completion of items specified for completion beyond time of substantial completion (regardless of whether special payment application was previously made).

Assurance, satisfactory to Owner, that unsettled claims will be settled and that work not actually completed and accepted will be completed without undue delay.

Transmittal of required project construction records to Owner.

Proof, satisfactory to the Owner, that taxes, fees and similar obligations of Contractor have been paid.

Removal of temporary facilities, services, surplus material, rubbish and similar elements.

Consent of Surety for final payment.

- E. Application Transmittal: Submit 3 executed copies of each payment application, one copy of which is completed with waivers of lien and similar attachments. Transmit each copy with a transmittal form listing those attachments. Transmit each copy with a transmittal form listing those attachments, and recording appropriate information related to application in a manner acceptable to Engineer. Transmit to Engineer by means ensuring receipt within 24 hours.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01310

SECTION 01340 - SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1.02 DESCRIPTION OF REQUIREMENTS:

- A. General: This section specifies procedural requirements for non-administrative submittals including shop drawings, product data, samples and other miscellaneous work-related submittals. Shop drawings, product data, samples and other work-related submittals are required to amplify, expand and coordinate the information contained in the Contract Documents.

Refer to other Division 1 sections and other contract documents for specifications on administrative, non-work-related submittals. Such submittals include, but are not limited to, the following items:

Permits
Payment Applications
Performance and Payment Bonds
Insurance Certificates
Inspection and Test Reports
Schedule of Values
Progress Reports
Listing of Subcontractors

- B. Shop Drawings are technical drawings and data that have been specially prepared for this project, including, but not limited to, the following items:

Sieve and quarry Analysis	Screening
Concrete Design Mix Formulas	Fence
Geotextile	Landscaping
Steel	Lighting

Standard information prepared without specified reference to a project is not considered to be shop drawings.

- C. Product data includes standard printed information on manufactured products that has not been specially-prepared for this project, including, but not limited to, the following items:

Sieve and quarry Analysis	Screening
Concrete Design Mix Formulas	Fence
Geotextile	Landscaping
Steel	Lighting

1.03 SUBMITTAL PROCEDURES:

- A. General: Refer to the General Conditions for basic procedures for submitting handling:
- B. Coordination: Coordinate the preparation and processing of submittals with the performance of the work. Coordinate each separate submittal with other submittals and related activities such as testing, purchasing, fabrication, delivery and similar activities that require sequential activity.
- Coordinate the submittal of different units of interrelated work so that one submittal will not be delayed by the Engineer's need to review a related submittal. The Engineer reserves the right to withhold action on any submittal requiring coordination with other submittals until related submittals are forthcoming.
- C. Scheduling: In each appropriate administrative submittal, such as the progress schedule, show the principal work-related submittals and time requirements for coordination of submittal activity with related work.
- D. Listing: Prepare a separate listing showing principal work-related submittals and their initial submittal dates as required for coordination of the work. Organize the listing by the related specification number sequence. Submit the listing within 15 days of the date of commencement of the work.
- E. Coordination of Submittal Times: Prepare and transmit each submittal to the Engineer sufficiently in advance of the scheduled performance of related work and other applicable activities. Transmit different kinds of submittals for the same unit of work so that processing will not be delayed by the Engineer's need to review submittals concurrently for coordination.
- F. Review Time: Allow sufficient time so that the installation will not be delayed as a result of the time required to properly process submittals, including time for resubmittal, if necessary. Advise the Engineer on each submittal, as to whether processing time is critical to the progress of the work, and if the work would be expedited if processing time could be shortened.

No extension of time will be authorized because of the Contractor's failure to transmit submittals to the Engineer sufficiently in advance of the work.

- G. Submittal Preparation: Mark each submittal with a permanent label for identification. Provide the following information on the label for proper processing and recording of action taken.

Project name.
Date.
Name and address of Engineer.
Name and address of Contractor.
Name and address of Subcontractor.
Name and address of Supplier.
Name of Manufacturer.
Number and title of appropriate specification section.
Drawing number and detail reference, as appropriate.
Similar definitive information as necessary.

Provide a space on the label for the Contractor's review and approval markings, and a space for the Engineer's "Action" marking.

Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Engineer, and to other destinations indicated, by use of a transmittal form. Submittals received from sources other than the Contractor will be returned to the Sender "without action".

- H. Transmittal Form: AIA Document G810 or a form approved by the Engineer.

1.04 SPECIFIC SUBMITTAL REQUIREMENTS:

- A. General: Specific submittal requirements for individual units of work are specified in the applicable specification section. Except as otherwise indicated in the individual specification sections, comply with the requirements specified herein for each type of submittal.
- B. Submittal: Provide five (5) prints; two (2) prints will be retained, the remainder will be returned. One of the prints returned is to be marked up and maintained by the Contractor as a "Record Document".

1.05 ENGINEER'S ACTION:

- A. General: Except for submittals for the record and similar purposes, where action and return on submittal is required or requested, the Engineer will review each submittal, mark with appropriate "Action", and where possible return within two (2) weeks of receipt. Where the

submittal must be held for coordination, the Engineer will so advise the Contractor without delay.

- B. Action Stamp: The Engineer will stamp each submittal to be returned with a uniform, self explanatory action stamp, appropriately marked and executed to indicate whether the submittal returned is for "revision and Resubmittal" or if satisfactory to the Engineer shall be marked to indicate "No Exception Taken".

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01340

SECTION 01400 - QUALITY CONTROL SERVICES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to this Section.

1.02 SUMMARY:

- A. This Section specifies administrative and procedural requirements for quality control services.

Quality control services include inspections and tests and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include Contract enforcement activities performed by the Engineer.

Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Contract Document requirements.

Requirements of this section relate to testing of concrete cylinders, not production of standard products.

Specific quality control requirements for individual construction activities are specified in the Sections that specify those activities.

Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Contract Document requirements.

Requirements for the Contractor to provide quality control services required by the Engineer, Owner, or authorities having jurisdiction are not limited to provisions of this Section.

1.03 RESPONSIBILITIES:

- A. Contractor Responsibilities: The Contractor shall provide inspections, tests and similar quality control services, specified in individual Specification Sections and required by governing authorities, except where they are specifically indicated to be the Owner's responsibility, or are provided by another identified entity; these services include those specified to be performed by an independent agency and not by the Contractor. Costs for these services shall be included in the Contract Sum.

The Contractor shall employ and pay an independent agency, to perform specified quality control services.

- B. Retesting: The Contractor is responsible for retesting where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance with Contract Document requirements, regardless of whether the original test was the Contractor's responsibility.

Cost of retesting construction revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original construction.

- C. Associated Services: The Contractor shall cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include, but are not limited to:

1. Providing access to the Work and furnishing incidental labor and facilities necessary to facilitate inspections and tests.
2. Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.
3. Providing facilities for storage and curing of test samples and delivery of samples to testing laboratories.
4. Providing the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
5. Security and protection of samples and test equipment at the Project site.

- D. Duties of the Testing Agency: The independent testing agency engaged to perform inspections, sampling and testing of materials and construction specified in individual Specification Sections shall cooperate with the Engineer and Contractor in performance of its duties, and shall provide qualified personnel to perform required inspections and tests.

The agency shall notify the Engineer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.

The agency is not authorized to release, revoke, alter or enlarge requirements of the Contract Documents, or approve or accept any portion of the Work.

The agency shall not perform any duties of the Contractor.

- E. Coordination: The Contractor and each agency engaged to perform inspections, tests and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition the Contractor and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

The Contractor is responsible for scheduling times for inspections, tests, taking samples and similar activities.

1.04 SUBMITTALS:

- A. The independent testing agency shall submit a certified written report of each inspection, test or similar service to the Engineer, in duplicate, unless the Contractor is responsible for the service. If the Contractor is responsible for the service, submit a certified written report of each inspection, test or similar service through the Contractor, in duplicate.

Submit additional copies of each written report directly to the governing authority, when the authority so directs.

- B. Report Data: Written reports of each inspection, test or similar service shall include, but not be limited to:

- Date of issue.
- Project title and number.
- Name, address and telephone number of testing agency.
- Dates and locations of samples and tests or inspections.
- Name of individuals making the inspection or test.
- Designation of the Work and test method.
- Identification of product and Specification Section.
- Complete inspection or test data.
- Test results and an interpretation of test results.
- Ambient conditions at the time of sample-taking and testing.
- Comments or professional opinion as to whether inspected or tested Work complies with Contract Document requirements.
- Name and signature of laboratory inspector.
- Recommendations on retesting.

1.05 QUALITY ASSURANCE:

- A. Qualification for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories which are prequalified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and which specialize in the types of inspections and

tests to be performed.

Each independent inspection and testing agency engaged on the Project shall be authorized by authorized having jurisdiction to operate in the State in which the Project is located.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 REPAIR AND PROTECTION

- A. General: Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes.

Protect construction exposed by or for quality control service activities, and protect repaired construction.

Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

END OF SECTION 01400

SECTION 01420 - REFERENCES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Installer": Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

- J. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- K. "Experienced": When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- L. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.03 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- D. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.
- E. Copies of Standards: Each entity engaged in construction on Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
- F. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source and make them available on request.

- G. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ADAAG	Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities Available from Access Board www.access-board.gov	(800) 872-2253 (202) 272-5434
CFR	Code of Federal Regulations Available from Government Printing Office www.access.gpo.gov/nara/cfr	(888) 293-6498 (202) 512-1530
CRD	Handbook for Concrete and Cement Available from Army Corps of Engineers Waterways Experiment Station www.wes.army.mil	(601) 634-2355
DOD	Department of Defense Specifications and Standards Available from Defense Automated Printing Service //astimage.daps.dla.mil/online	(215) 697-6257
FED-STD	Federal Standard (See FS)	
FS	Federal Specification Available from Defense Automated Printing Service //astimage.daps.dla.mil/online	(215) 697-6257
	Available from General Services Administration www.fss.gsa.gov/pub/fed-specs.cfm	(202) 619-8925
	Available from National Institute of Building Sciences www.nibs.org	(202) 289-7800
FTMS	Federal Test Method Standard (See FS)	

MILSPEC	Military Specification and Standards Available from Defense Automated Printing Service //astimage.daps.dla.mil/online	(215) 697-6257
UFAS	Uniform Federal Accessibility Standards Available from Access Board www.access-board.gov	(800) 872-2253 (202) 272-5434

1.04 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AA	Aluminum Association, Inc. (The) www.aluminum.org	(202) 862-5100
AAADM	American Association of Automatic Door Manufacturers www.aaadm.com	(216) 241-7333
AABC	Associated Air Balance Council www.aabchq.com	(202) 737-0202
AAMA	American Architectural Manufacturers Association www.aamanet.org	(847) 303-5664
AAN	American Association of Nurserymen (See ANLA)	
AASHTO	American Association of State Highway and Transportation Officials www.aashto.org	(202) 624-5800
AATCC	American Association of Textile Chemists and Colorists (The) www.aatcc.org	(919) 549-8141

ABMA	American Bearing Manufacturers Association www.abma-dc.org	(202) 367-1155
ACI	American Concrete Institute/ACI International www.aci-int.org	(248) 848-3700
ACPA	American Concrete Pipe Association www.concrete-pipe.org	(972) 506-7216
ADC	Air Diffusion Council www.flexibleduct.org	(312) 201-0101
AEIC	Association of Edison Illuminating Companies, Inc. (The) www.aeic.org	(205) 257-2530
AFPA	American Forest & Paper Association (See AF&PA)	
AF&PA	American Forest & Paper Association www.afandpa.org	(800) 878-8878 (202) 463-2700
AGA	American Gas Association www.aga.org	(202) 824-7000
AGC	Associated General Contractors of America (The) www.agc.org	(703) 548-3118
AHA	American Hardboard Association www.ahardbd.org	(847) 934-8800
AHAM	Association of Home Appliance Manufacturers www.aham.org	(202) 872-5955
AI	Asphalt Institute www.asphaltinstitute.org	(859) 288-4960
AIA	American Institute of Architects (The) www.e-architect.com	(202) 626-7300
AISC	American Institute of Steel Construction www.aisc.org	(800) 644-2400 (312) 670-2400

AISI	American Iron and Steel Institute www.steel.org	(202) 452-7100
AITC	American Institute of Timber Construction www.aitc-glulam.org	(303) 792-9559
ALA	American Laminators Association (See LMA)	
ALCA	Associated Landscape Contractors of America www.alca.org	(800) 395-2522 (703) 736-9666
ALSC	American Lumber Standard Committee	(301) 972-1700
AMCA	Air Movement and Control Association International, Inc. www.amca.org	(847) 394-0150
ANLA	American Nursery & Landscape Association (Formerly: AAN - American Association of Nurserymen) www.anla.org	(202) 789-2900
ANSI	American National Standards Institute www.ansi.org	(202) 293-8020
AOSA	Association of Official Seed Analysts www.aosaseed.com	(402) 476-3852
APA	APA - The Engineered Wood Association www.apawood.org	(253) 565-6600
APA	Architectural Precast Association www.archprecast.org	(941) 454-6989
API	American Petroleum Institute www.api.org	(202) 682-8000
ARI	Air-Conditioning & Refrigeration Institute www.ari.org	(703) 524-8800
ASCA	Architectural Spray Coaters Association	(609) 848-6120

www.ascassoc.com

ASCE	American Society of Civil Engineers www.asce.org	(800) 548-2723 (703) 295-6300
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers www.ashrae.org	(800) 527-4723 (404) 636-8400
ASME	ASME International (The American Society of Mechanical Engineers International) www.asme.org	(800) 843-2763 (212) 591-7722
ASSE	American Society of Sanitary Engineering www.asse-plumbing.org	(440) 835-3040
ASTM	American Society for Testing and Materials www.astm.org	(610) 832-9585
AWCI	AWCI International (Association of the Wall and Ceiling Industries International) www.awci.org	(703) 534-8300
AWCMA	American Window Covering Manufacturers Association (See WCMA)	
AWI	Architectural Woodwork Institute www.awinet.org	(800) 449-8811 (703) 733-0600
AWPA	American Wood-Preservers' Association www.awpa.com	(817) 326-6300
AWS	American Welding Society www.aws.org	(800) 443-9353 (305) 443-9353
AWWA	American Water Works Association www.awwa.org	(800) 926-7337 (303) 794-7711
BHMA	Builders Hardware Manufacturers Association www.buildershardware.com	(212) 297-2122

BIA	Brick Industry Association (The) www.bia.org	(703) 620-0010
BIFMA	BIFMA International (Business and Institutional Furniture Manufacturer's Association International) www.bifma.com	(616) 285-3963
CCC	Carpet Cushion Council www.carpetcushion.org	(203) 637-1312
CCFSS	Center for Cold-Formed Steel Structures www.umn.edu/~ccfss	(573) 341-4471
CDA	Copper Development Association Inc. www.copper.org	(800) 232-3282 (212) 251-7200
CEA	Canadian Electricity Association www.canelect.ca	(613) 230-9263
CFFA	Chemical Fabrics & Film Association, Inc. www.chemicalfabricsandfilm.com	(216) 241-7333
CGA	Compressed Gas Association www.cganet.com	(703) 412-0900
CGSB	Canadian General Standards Board www.pwgsc.gc.ca/cgsb	(819) 956-0425
CIMA	Cellulose Insulation Manufacturers Association www.cellulose.org	(888) 881-2462 (937) 222-2462
CISCA	Ceilings & Interior Systems Construction Association www.cisca.org	(630) 584-1919
CISPI	Cast Iron Soil Pipe Institute www.cispi.org	(423) 892-0137
CLFMI	Chain Link Fence Manufacturers Institute www.chainlinkinfo.org	(301) 596-2583
CPA	Composite Panel Association (Formerly: National Particleboard Association)	(301) 670-0604

www.pbmdf.com

CPPA	Corrugated Polyethylene Pipe Association www.cppa-info.org	(800) 510-2772 (202) 462-9607
CRI	Carpet & Rug Institute (The) www.carpet-rug.com	(800) 882-8846 (706) 278-3176
CRSI	Concrete Reinforcing Steel Institute www.crsi.org	(847) 517-1200
CSA	CSA International (Formerly: IAS - International Approval Services) www.csa-international.org	(800) 463-6727 (416) 747-4000
CSI	Construction Specifications Institute (The) www.csinet.org	(800) 689-2900 (703) 684-0300
CSSB	Cedar Shake & Shingle Bureau www.cedarbureau.org	(604) 820-7700
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute) www.cti.org	(281) 583-4087
DHI	Door and Hardware Institute www.dhi.org	(703) 222-2010
EIA/TIA	Electronic Industries Alliance/Telecommunications Industry Association www.eia.org	(703) 907-7500
EIMA	EIFS Industry Members Association www.eifsfacts.com	(800) 294-3462 (770) 968-7945
EJMA	Expansion Joint Manufacturers Association, Inc. www.ejma.org	(914) 332-0040
FCI	Fluid Controls Institute www.fluidcontrolsintitute.org	(216) 241-7333
FGMA	Flat Glass Marketing Association	

(See GANA)

FM	Factory Mutual System (See FMG)	
FMG	FM Global (Formerly: FM - Factory Mutual System) www.fmglobal.com	(401) 275-3000
GA	Gypsum Association www.gypsum.org	(202) 289-5440
GANA	Glass Association of North America (Formerly: FGMA - Flat Glass Marketing Association) www.glasswebsite.com/gana	(785) 271-0208
GRI	Geosynthetic Research Institute www.drexel.edu/gri	(215) 895-2343
GTA	Glass Tempering Division of Glass Association of North America (See GANA)	
HI	Hydraulic Institute www.pumps.org	(888) 786-7744 (973) 267-9700
HI	Hydronics Institute www.gamanet.org	(908) 464-8200
HMMA	Hollow Metal Manufacturers Association (See NAAMM)	
HPVA	Hardwood Plywood & Veneer Association www.hpva.org	(703) 435-2900
HPW	H. P. White Laboratory, Inc. www.hpwhite.com	(410) 838-6550
IAS	International Approval Services (See CSA International)	
ICEA	Insulated Cable Engineers Association, Inc. www.icea.net	(508) 394-4424

ICRI	International Concrete Repair Institute (The) www.icri.org	(703) 450-0116
IEC	International Electrotechnical Commission www.iec.ch	41 22 919 02 11
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The) www.ieee.org	(212) 419-7900
IESNA	Illuminating Engineering Society of North America www.iesna.org	(212) 248-5000
IGCC	Insulating Glass Certification Council www.igcc.org	(315) 646-2234
ILI	Indiana Limestone Institute of America, Inc. www.iliai.com	(812) 275-4426
IRI	Industrial Risk Insurers www.industrialrisk.com	(800) 243-7308 (860) 520-7300
ITS	Intertek Testing Services www.itsglobal.com	(800) 345-3851 (607) 753-6711
IWS	Insect Screening Weavers Association (Now defunct)	
KCMA	Kitchen Cabinet Manufacturers Association www.kcma.org	(703) 264-1690
LGSI	Light Gage Structural Institute www.loseke.com	(972) 370-0967
LMA	Laminating Materials Association (Formerly: ALA - American Laminators Association) www.lma.org	(201) 664-2700
LPI	Lightning Protection Institute www.lightning.org	(800) 488-6864 (847) 577-7200
LSGA	Laminated Safety Glass Association	

(See GANA)

MBMA	Metal Building Manufacturers Association www.mbma.com	(216) 241-7333
MCA	Metal Construction Association www.metalconstruction.org	(312) 201-0193
MFMA	Maple Flooring Manufacturers Association www.maplefloor.org	(847) 480-9138
MFMA	Metal Framing Manufacturers Association	(312) 644-6610
MGPHO	Medical Gas Professional Healthcare Organization, Inc. www.mgpho.org	(877) 238-5157 (913) 681-6548
MHIA	Material Handling Industry of America www.mhia.org	(800) 345-1815 (704) 676-1190
MIA	Marble Institute of America www.marble-institute.com	(614) 228-6194
ML/SFA	Metal Lath/Steel Framing Association (See SSMA)	
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc. www.mss-hq.com	(703) 281-6613
NAAMM	National Association of Architectural Metal Manufacturers www.naamm.org	(312) 332-0405
NAAMM	North American Association of Mirror Manufacturers (See GANA)	
NACE	NACE International (National Association of Corrosion Engineers International) www.nace.org	(281) 228-6200
NAIMA	North American Insulation Manufacturers Association (The)	(703) 684-0084

	www.naima.org	
NAMI	National Accreditation and Management Institute, Inc.	(304) 258-5100
NAPM	National Association of Photographic Manufacturers (See PIMA)	
NBGQA	National Building Granite Quarries Association, Inc. www.nbgqa.com	(800) 557-2848
NCMA	National Concrete Masonry Association www.ncma.org	(703) 713-1900
NCPI	National Clay Pipe Institute www.ncpi.org	(414) 248-9094
NCTA	National Cable Television Association www.ncta.com	(202) 775-3669
NEBB	National Environmental Balancing Bureau www.nebb.org	(301) 977-3698
NECA	National Electrical Contractors Association www.necanet.org	(301) 657-3110
NeLMA	Northeastern Lumber Manufacturers' Association www.nelma.org	(207) 829-6901
NEMA	National Electrical Manufacturers Association www.nema.org	(703) 841-3200
NETA	InterNational Electrical Testing Association www.netaworld.org	(303) 697-8441
NFPA	National Fire Protection Association www.nfpa.org	(800) 344-3555 (617) 770-3000
NFRC	National Fenestration Rating Council www.nfrc.org	(301) 589-6372
NGA	National Glass Association www.glass.org	(703) 442-4890

NHLA	National Hardwood Lumber Association www.natlhardwood.org	(800) 933-0318 (901) 377-1818
NLGA	National Lumber Grades Authority www.nlga.org	(604) 524-2393
NOFMA	National Oak Flooring Manufacturers Association www.nofma.org	(901) 526-5016
NPA	National Particleboard Association (See CPA)	
NRCA	National Roofing Contractors Association www.nrca.net	(800) 323-9545 (847) 299-9070
NRMCA	National Ready Mixed Concrete Association www.nrmca.org	(888) 846-7622 (301) 587-1400
NSA	National Stone Association www.aggregates.org	(800) 342-1415 (703) 525-8788
NSF	NSF International (National Sanitation Foundation International) www.nsf.org	(800) 673-6275 (734) 769-8010
NTMA	National Terrazzo and Mosaic Association, Inc. www.ntma.com	(800) 323-9736 (703) 779-1022
NWWDA	National Wood Window and Door Association (See WDMA)	
PCI	Precast/Prestressed Concrete Institute www.pci.org	(312) 786-0300
PDCA	Painting and Decorating Contractors of America www.pdca.com	(800) 332-7322 (703) 359-0826
PDI	Plumbing & Drainage Institute www.pdionline.org	(800) 589-8956 (508) 230-3516
PGI	PVC Geomembrane Institute //pgi-tp.ce.uiuc.edu	(217) 333-3929

PIMA	Photographic & Imaging Manufacturers Association (Formerly: NAPM - National Association of Photographic Manufacturers) www.pima.net	(914) 698-7603
RCSC	Research Council on Structural Connections www.boltcouncil.org	(800) 644-2400 (312) 670-2400
RFCI	Resilient Floor Covering Institute (Contact by mail only)	
RIS	Redwood Inspection Service www.calredwood.org	(888) 225-7339 (415) 382-0662
RMA	Rubber Manufacturers Association www.rma.org	(800) 220-7620 (202) 682-4800
SAE	SAE International www.sae.org	(724) 776-4841
SDI	Steel Deck Institute www.sdi.org	(847) 462-1930
SDI	Steel Door Institute www.steeldoor.org	(440) 899-0010
SEFA	Scientific Equipment and Furniture Association www.sefalabfurn.com	(843) 689-6878
SGCC	Safety Glazing Certification Council www.sgcc.org	(315) 646-2234
SIGMA	Sealed Insulating Glass Manufacturers Association www.sigmaonline.org/sigma	(312) 644-6610
SJI	Steel Joist Institute www.steeljoist.org	(843) 626-1995
SMA	Screen Manufacturers Association	(561) 533-0991
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association www.smacna.org	(703) 803-2980

SPFA	Spray Polyurethane Foam Alliance (Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division) www.sprayfoam.org	(800) 523-6154
SPI	The Society of the Plastics Industry www.plasticsindustry.org	(202) 974-5200
SPIB	Southern Pine Inspection Bureau (The) www.spib.org	(850) 434-2611
SPI/SPFD	The Society of the Plastics Industry Spray Polyurethane Foam Division (See SPFA)	
SPRI	SPRI (Single Ply Roofing Institute) www.spri.org	(781) 444-0242
SSINA	Specialty Steel Industry of North America www.ssina.com	(800) 982-0355 (202) 342-8630
SSMA	Steel Stud Manufacturers Association (Formerly: ML/SFA - Metal Lath/Steel Framing Association) www.ssma.com	(312) 456-5590
SSPC	SSPC: The Society for Protective Coatings www.sspc.org	(800) 837-8303 (412) 281-2331
STI	Steel Tank Institute www.steeltank.com	(847) 438-8265
SWI	Steel Window Institute www.steelwindows.com	(216) 241-7333
SWRI	Sealant, Waterproofing, and Restoration Institute www.swrionline.org	(816) 472-7974
TCA	Tile Council of America, Inc. www.tileusa.com	(864) 646-8453

TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance www.tiaonline.org	(703) 907-7700
TPI	Truss Plate Institute	(608) 833-5900
TPI	Turfgrass Producers International www.turfgrassod.org	(800) 405-8873 (847) 705-9898
UFAC	Upholstered Furniture Action Council www.ufac.org	(336) 885-5065
UL	Underwriters Laboratories Inc. www.ul.com	(800) 704-4050 (847) 272-8800
UNI	Uni-Bell PVC Pipe Association www.uni-bell.org	(972) 243-3902
USITT	United States Institute for Theatre Technology, Inc. www.culturenet.ca/usitt	(800) 938-7488 (315) 463-6463
USP	U.S. Pharmacopeia www.usp.org	(800) 822-8772 (301) 881-0666
WASTEC	Waste Equipment Technology Association www.wastec.org	(800) 424-2869 (202) 244-4700
WCLIB	West Coast Lumber Inspection Bureau www.wclib.org	(800) 283-1486 (503) 639-0651
WCMA	Window Covering Manufacturers Association (Formerly: AWCMA - American Window Covering Manufacturers Association) www.windowcoverings.org	(800) 506-4653 (212) 661-4261
WDMA	Window & Door Manufacturers Association (Formerly: NWWDA - National Wood Window and Door Association) www.wdma.com	(800) 223-2301 (847) 299-5200
WIC	Woodwork Institute of California	(916) 372-9943

www.wicnet.org

WMMPA	Wood Moulding & Millwork Producers Association www.wmmpa.com	(800) 550-7889 (530) 661-9591
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WWPA	Western Wood Products Association www.wwpa.org	(503) 224-3930
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- C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

BOCA	BOCA International, Inc. www.bocai.org	(708) 799-2300
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CABO	Council of American Building Officials (See ICC)	
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IAPMO	International Association of Plumbing and Mechanical Officials (The) www.iapmo.org	(909) 595-8449
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ICBO	International Conference of Building Officials www.icbo.org	(800) 284-4406 (562) 699-0541
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ICC	International Code Council (Formerly: CABO - Council of American Building Officials) www.intlcode.org	(703) 931-4533
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SBCCI	Southern Building Code Congress International, Inc. www.sbcci.org	(205) 591-1853
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- D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CE	Army Corps of Engineers www.usace.army.mil	
CPSC	Consumer Product Safety Commission www.cpsc.gov	(800) 638-2772 (301) 504-0990
DOC	Department of Commerce www.doc.gov	(202) 482-2000
EPA	Environmental Protection Agency www.epa.gov	(202) 260-2090
FAA	Federal Aviation Administration www.faa.gov	(202) 366-4000
FCC	Federal Communications Commission www.fcc.gov	(202) 418-0190
FDA	Food and Drug Administration www.fda.gov	(888) 463-6332
GSA	General Services Administration www.gsa.gov	(202) 708-5082
HUD	Department of Housing and Urban Development www.hud.gov	(202) 708-1112
LBL	Lawrence Berkeley Laboratory (See LBNL)	
LBNL	Lawrence Berkeley National Laboratory www.lbl.gov	(510) 486-5605
NCHRP	National Cooperative Highway Research Program (See TRB)	
NIST	National Institute of Standards and Technology www.nist.gov	(301) 975-6478
OSHA	Occupational Safety & Health Administration www.osha.gov	(202) 693-1999
RUS	Rural Utilities Service	(202) 720-9540

(See USDA)

TRB	Transportation Research Board www.nas.edu/trb	(202) 334-2934
USDA	Department of Agriculture www.usda.gov	(202) 720-2791
USPS	Postal Service www.usps.com	(202) 268-2000

- E. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CAPU (See CPUC)
C

CBHF	State of California, Department of Consumer Affairs Bureau of Home Furnishings and Thermal Insulation www.dca.ca.gov/bhfti	(800) 952-5210 (916) 445-1254
CPUC	California Public Utilities Commission www.cpuc.ca.gov	(415) 703-2782
TFS	Texas Forest Service Forest Products Laboratory //txforestsERVICE.tamu.edu	(936) 639-8180

PRODUCTS (Not Used)

EXECUTION (Not Used)

END OF SECTION

SECTION 01500 - TEMPORARY FACILITIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 SUMMARY:

- A. This section specifies requirements for temporary services and facilities, including construction and support facilities, security and protection.
- B. Temporary construction and support facilities required include but are not limited to:
- Storage sheds.
 - Sanitary facilities, including drinking water.
 - Waste disposal services.
 - Telephone
 - Maintenance and Protection of Traffic
- C. Water: Provide potable water approved by local health authorities.

1.03 EQUIPMENT:

- A. General: Provide new equipment; if acceptable to the Engineer, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.
- B. Storage Sheds: Provide prefabricated or mobile units or similar job-built construction with lockable entrances.
- C. Temporary Toilet Units: Provide self-contained single-occupant toilet units of the chemical, aerated recirculation, or combustion type, properly vented and fully enclosed with a glass fiber reinforced polyester shell or similar nonabsorbent material.
- D. First Aid Supplies: Comply with governing regulations.
- E. Temporary Telephone: Provide cell phone or mobile phone service.

1.04 QUALITY ASSURANCE:

- A. Regulations: The Contractor shall comply with local laws and regulations governing construction and local industry standards, in the installation and maintenance of temporary services and facilities, including, but not limited to, the following:
1. Building codes, including local requirements for permits, testing and inspection.
 2. Health and safety regulations.
 3. Utility company regulations and recommendations governing temporary utility services.
 4. Fire Department rules and regulations.
 5. Police and Rescue Squad recommendations.
 6. Environmental protection regulations governing use of water and energy, and control of dust, noise and other nuisances.

1.05 JOB CONDITIONS:

- A. General: The Contractor shall provide each temporary service and facility ready for use at each location, when first needed to avoid delays in performance of work. Maintain, expand as required, and modify as needed throughout the progress of the work. Do not remove until services or facilities are no longer needed, or are replaced by the authorized use of completed permanent facilities.
- B. Temporary Use of Permanent Facilities: Regardless of previously assigned responsibilities for temporary services and facilities, the Installer of each permanent service or facility shall assume responsibility for its operation, maintenance and protection during use as a construction facility prior to the Owner's acceptance and operation of the facility.
- C. Conditions of Use: Operate temporary services and facilities in a safe and efficient manner. Do not overload, and do not permit temporary services and facilities to interfere with the progress of work. Do not allow unsanitary conditions, public nuisances or hazardous conditions to develop or persist on the site.
1. Temporary Utilities: Do not permit freezing of pipes, flooding or contamination of water sources.
 2. Temporary Construction and Support Facilities: Maintain temporary facilities in a manner to prevent discomfort to users. Take necessary fire prevention measures. Maintain temporary facilities in a sanitary manner so as to avoid health problems.
 3. Security and Protection: Maintain site security and protection facilities in a safe, lawful, publicly acceptable manner. Take measures necessary to prevent site erosion.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interferences with performance of the Work. Relocate and modify facilities as required.

Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed, or are replaced by authorized use of completed permanent facilities.

3.02 TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION:

- A. Locate storage sheds, sanitary facilities and other temporary construction and support facilities for each access.

Maintain temporary construction and support facilities until near Substantial Completion. Remove prior to Substantial Completion.

- B. Storage and Fabrication Sheds: Install storage and fabrication sheds, sized, furnished and equipped to accommodate materials and equipment involved.

- C. Sanitary facilities include temporary toilets, wash facilities and drinking water fixtures. Comply with regulations and health codes for the type, number, location, operation and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.

Provide toilet tissue, paper towels, paper cups and similar disposable materials for each facility. Provide covered waste containers for used materials.

- D. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted.

- E. Wash Facilities: Install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a healthy and sanitary condition. Dispose of drainage properly. Supply cleaning compounds appropriate for each condition.

- F. Drinking Water Facilities: Provide containerized tap-dispenser bottled-water type drinking water units, including paper supply.
- G. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg. F (27 deg. C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

3.04 SECURITY AND PROTECTION FACILITIES INSTALLATION:

- A. Barricades, Warning Signs and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed provide lighting, including flashing red or amber lights.
- B. Enclosure Fence: When excavation begins, install an enclosure fence. Locate where indicated, or enclose the entire site or the portion determined sufficient to accommodate construction operations. Install in a manner that will prevent people, dogs and other animals from easily entering the site.
- C. Security Enclosure: Install substantial temporary enclosure of partially completed areas of construction. Provide entrances to prevent unauthorized entrance, vandalism, theft, and similar violations to security.
 - 1. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- D. Environmental Protection: Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result. Avoid use of tools and equipment which produce harmful noise. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near the site.

3.05 OPERATION, TERMINATION AND REMOVAL:

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended use to minimize waste and abuse.

- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
- C. Termination and Removal: Unless the Engineer requests that it be maintained longer, remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of the Contractor.

END OF SECTION 01500

SECTION 01700 - PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to work of this section.

1. Summary:

This section specifies administrative and procedural requirements for project closeout, including, but not limited to:

Inspection procedures.
Project record documents submittals.
Final cleaning.

1.02 DESCRIPTION OF REQUIREMENTS:

- A. Definitions: Project closeout is the term used to describe certain collective project requirements, indicating completion of the Work that are to be fulfilled near the end of the Contract time in preparation for final acceptance and occupancy of the Work by the Owner, as well as final payment to the Contractor and the normal termination of the Contract.

Specific requirements for individual units of work are included in the appropriate sections in Divisions 2 through 03410.

Time of closeout is directly related to "Substantial Completion"; therefore, the time of closeout may be either a single time period for the entire work or a series of time periods for individual elements of the work that have been certified as substantially complete at different dates. This time variation, if any, shall be applicable to the other provisions of this section.

1.03 PREREQUISITES TO SUBSTANTIAL COMPLETION:

- A. General: Complete the following before requesting the Engineer's inspection for certification of substantial completion, either for the entire Work or for portions of the Work. List known exceptions in the request.

In the progress payment request that coincides with, or is the first request following, the date of substantial completion is claimed, show either 100% completion for the portion of the Work claimed as "substantially complete", or list incomplete items, the value of incomplete work, and reasons for work being incomplete.

Include supporting documentation for completion as indicated in these contract documents.

Submit a statement showing an accounting of changes to the Contract Sum.

Advise Owner of pending insurance change-over requirements.

Obtain and submit releases enabling Owner's full, unrestricted use of the Work and access to services and utilities. Where required, include occupancy permits, operating certificates and similar releases.

Advise the Owner's personnel of the change-over in security provisions.

Complete final cleaning up requirements.

- B. Inspection Procedures: Upon receipt of Contractor's request for inspection, the Engineer will either proceed with inspection or advise Contractor of unfulfilled prerequisites.

Following the initial inspection, the Engineer will either prepare the certificate of substantial completion, or will advise Contractor of work which must be performed before the certificate will be issued. The Engineer will repeat the inspection when requested and when assured that the Work has been substantially completed.

Results of the completed inspection will form the initial "punch-list" for final acceptance.

1.04 PREREQUISITE TO FINAL ACCEPTANCE:

- A. General: Complete the following before requesting the Engineer's final inspection for certification of final acceptance, and final payment as required by the General Conditions. List known exceptions, if any, in request.

Submit the final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.

Submit an updated final statement, accounting for final additional changes to the Contract Sum.

Submit a certified copy of the Engineer's final punch-list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and has been endorsed and dated by the Engineer.

Submit two (2) completed copies of AIA Document G707, Consent of Surety to Final Payment.

Submit two (2) completed copies of AIA Document G706, Release of Liens.

Submit two (2) completed copies of AIA Document G-706A, Release of Liens.

Submit two (2) completed copies of Verified Statement of Prevailing Wages.

- B. Reinspection Procedure: The Engineer will reinspect the Work upon receipt of the Contractor's notice that the work, including punch-list items resulting from earlier inspections, has been completed, except for these items whose completion has been delayed because of circumstances that are acceptable to the Engineer.

Upon completion of reinspection, the Engineer will either prepare a certificate of final acceptance, or will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled, but are required for final acceptance.

If necessary, the reinspection procedure will be repeated.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 FINAL CLEANING:

- A. General: Special cleaning requirements for specific units of Work are included in the appropriate sections. General Cleaning during the regular progress of the Work is required by the General Conditions and is included under section "Temporary Facilities".
- B. Cleaning: Provide final cleaning of the Work at the time indicated.

Complete the following cleaning operations before requesting the Engineer's inspection for certification of substantial completion.

Clean the project site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas to a broom-clean condition; remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth, even-textured surface.

- C. Removal of Protection: Except as otherwise indicated or requested by the Engineer, remove temporary protection devices and facilities which were installed during the course of the work to protect the previously completed work during the remainder of the construction period.
- D. Compliance: Comply with safety standards and governing regulations for cleaning

operations. Do not burn waste materials at the site. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile or other harmful materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.

END OF SECTION 01700

SECTION 02200 – GENERAL STRUCTURAL SPECIFICATIONS

- 1.) All shop drawings for steel reinforcing bars, structural steel, light steel framing members, and steel deck indicating the fabricator manufacturer, finish, layout, and all accessories must be submitted to and be checked by the contractor and bear the checkers initials before submission to the engineer for review prior to fabrication. See specifications for shop drawing submittal requirements.
- 2.) Incorrectly fabricated, damaged or otherwise misaligned or non-conforming materials or conditions shall be reported to the architect/engineer prior to remedial or corrective action.
- 3.) The structural drawings shall be coordinated with the architectural, m/e/p drawings (including all contract shop drawings) and equipment manufacturers to ensure that openings, anchors, inserts, sleeves, attachments, etc. Are provided as required. Some of the details of the work are shown on these drawings and should be carefully reviewed by the contractor to fully comprehend the full scope of work.
- 4.) The contractor shall be responsible for verifying and coordinating all dimensions with the architectural and m/e/p drawings. In case of conflict, the contractor shall immediately request a clarification from the architect / engineer.
- 5.) The contractor shall make no deviation from the design drawings without prior written approval from the architect / engineer.
- 6.) In case of conflict between notes, details and specifications, the most stringent requirements shall govern.
- 7.) This structure has been designed to be self-supporting and stable after construction of the structure has been completed. The stability of the structure prior to completion is the sole responsibility of the contractor. Job site safety and construction procedures are the sole responsibility of the contractor. Lack of comment by the architect/ engineer is not to be interpreted as approval of those aspects of work.
- 8.) Loads applied to the structure during construction shall not exceed the safe load-carrying capacity of the structure as indicated by the scheduled live loadings shown on the drawings.

SPECIAL INSPECTIONS

- 1.) Special inspectors and testing laboratory services shall be engaged by the owner or the owner's representatives per the requirements of the IBC or the Building Code of New York state, Section 1704, as accepted and modified by the building code official having jurisdiction on this project.
- 2.) Shop inspection of fabricated items as required by Section 1704.2
- 3.) Field inspection of structural steel, high-strength bolting, welding, and lateral load resisting moment connections as required by Section 1704.3
- 4.) Concrete construction including concrete mix designs, concrete additives, formwork, reinforcing sizes and placement as required by Sections 1704.4
- 5.) Masonry construction as required by Section 1704.5. Special attention is directed to required masonry shear walls for this project.
- 6.) Prepared fill including underlying materials on site, placement and compaction of fill materials in specified maximum lifts, and in-place density of compacted fill per the Geotechnical recommendations and as required by Section 1704.7.
- 7.) Component and attachment inspections and testing as required by Section 1708.

END OF SECTION 02200

SECTION 02230 – SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Protecting existing trees to remain.
 - 2. Removing existing trees, shrubs and grass.
 - 3. Clearing and grubbing.
 - 4. Stripping and stockpiling topsoil.
 - 5. Removing above- and below-grade site improvements.
 - 6. Disconnecting, capping or sealing, and abandoning site utilities in place.
 - 7. Temporary erosion and sedimentation control measures.

1.3 DEFINITIONS

- A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and loamy fine sand; friable, pervious, and dark brown or darker shade of brown than underlying subsoil; reasonably free of subsoil (yellow-brown and dark yellowish brown loamy fine sand), gravel, and other objects more than 2 inches (50 mm) in diameter; and free of subsoil and weeds, roots, toxic materials, or other nonsoil materials.
- B. Tree Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and defined by the drip line of individual trees or the perimeter drip line of groups of trees, unless otherwise indicated.

1.4 MATERIAL OWNERSHIP

- A. Except for stripped topsoil or other materials indicated to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 SUBMITTALS

- A. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.
- B. Record drawings, according to Division 1 Section "Project Record Documents," identifying and accurately locating capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 QUALITY ASSURANCE

- A. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.7 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- B. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
 - 1. Do not proceed with work on adjoining property until directed by Architect.
- C. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.
- D. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
- E. Do not commence site clearing operations until temporary erosion and sedimentation control measures are in place.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Division 2 Section "Earthwork."
 - 1. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly flag trees and vegetation to remain or to be relocated.
- C. Protect existing site improvements to remain from damage during construction.
 - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to [requirements of authorities having jurisdiction], SP3: Sediment and Erosion Control Plan, specific to the site, that complies with EPA 832/R-92-005 or requirements of authorities having jurisdiction, whichever is more stringent.
- B. Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- C. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 TREE PROTECTION

- A. Erect and maintain temporary fencing around tree protection zones before starting site clearing. Remove fence when construction is complete.

1. Do not store construction materials, debris, or excavated material within fenced area.
 2. Do not permit vehicles, equipment, or foot traffic within fenced area.
 3. Maintain fenced area free of weeds and trash.
- B. Do not excavate within tree protection zones, unless otherwise indicated.
- C. Where excavation for new construction is required within tree protection zones, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.
1. Cover exposed roots with burlap and water regularly.
 2. Temporarily support and protect roots from damage until they are permanently redirected and covered with soil.
 3. Coat cut faces of roots more than 1-1/2 inches (38 mm) in diameter with an emulsified asphalt or other approved coating formulated for use on damaged plant tissues.
 4. Backfill with soil as soon as possible.
- D. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by Landscape Architect.
1. Employ an arborist, licensed in jurisdiction where Project is located, to submit details of proposed repairs and to repair damage to trees and shrubs.
 2. Replace trees that cannot be repaired and restored to full-growth status, as determined by Architect.

3.4 UTILITIES

- A. Owner will arrange for disconnecting and sealing indicated utilities that serve existing structures before site clearing, when requested by Contractor.
1. Verify that utilities have been disconnected and capped before proceeding with site clearing.
- B. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
1. Arrange with utility companies to shut off indicated utilities.
 2. Owner will arrange to shut off indicated utilities when requested by Contractor.
- C. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
1. Notify Architect not less than two days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without Architect's written permission.

- D. Excavate for and remove underground utilities indicated to be removed.
- E. Removal of underground utilities is included in Division 2 Sections covering site utilities.

3.5 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction.
 - 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 - 2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
 - 3. Grind stumps and remove roots, obstructions, and debris extending to a depth of 18 inches (450 mm) below exposed subgrade.
 - 4. Use only hand methods for grubbing within tree protection zone.
 - 5. Chip removed tree branches and dispose of off-site.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches (200 mm), and compact each layer to a density equal to adjacent original ground.

3.6 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - 1. Remove subsoil and nonsoil materials from topsoil, including trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Limit height of topsoil stockpiles to 72 inches (1800 mm).
 - 2. Do not stockpile topsoil within tree protection zones.
 - 3. Dispose of excess topsoil as specified for waste material disposal.
 - 4. Stockpile surplus topsoil to allow for respreading deeper topsoil.

3.7 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.
 - 2. Paint cut ends of steel reinforcement in concrete to remain to prevent corrosion.

3.8 DISPOSAL

- A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
 - 1. Separate recyclable materials produced during site clearing from other non-recyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities.

END OF SECTION 02230

SECTION 02400 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Demolition and removal of selected portions of building or structure.
 - 2. Demolition and removal of selected site elements.
 - 3. Salvage of existing items to be reused or recycled.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Kingston Water Treatment Plant, East Strand Street, Kingston NY
 - 1. Inspect and discuss condition of construction to be selectively demolished.
 - 2. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 3. Review areas where existing construction is to remain and requires protection.
 - 4. Contractor shall conduct probes as needed to locate underground pipes prior to any excavation. Locations of all revealed underground pipes shall be reported to architect and engineer prior to excavation work.

1.6 INFORMATIONAL SUBMITTALS

- A. Proposed Protection Measures: Submit report, including drawings as needed, that indicates the measures proposed for protecting individuals and property. Indicate proposed locations and construction of barriers.
- B. Schedule of Selective Demolition Activities: Indicate the following:
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Facility Engineers' on-site operations are uninterrupted.
 - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
 - 3. Coordination for shutoff, capping, and continuation of utility services.
 - 4. Use of entrance stairs.
 - 5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- C. Predemolition Photographs or Video: Submit before Work begins.

1.7 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.
- B. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.8 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection access at driveways and maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review record documents of existing construction provided by Architect. Architect does not guarantee that existing conditions are same as those indicated in record documents.
- C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

- D. When unanticipated mechanical, electrical, or structural elements - including systems located underground - that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.
 - 1. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by demolition or salvage operations.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
 - 1. Comply with requirements for existing services/systems interruptions specified in Section 011000 "Summary."
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Facilities Engineer will arrange to shut off indicated services/systems when requested by Contractor.
 - 2. Arrange to shut off indicated utilities with utility companies.
 - 3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Cover and protect all equipment in work areas that have not been removed.
- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of

construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 4. Maintain adequate ventilation when using cutting torches.
 5. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 6. Dispose of demolished items and materials promptly.
- B. Removed and Salvaged Items:
1. Clean salvaged items.
 2. Transport items to Owner's storage area designated by Owner.
 3. Protect items from damage during transport and storage.
- C. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
 2. Protect items from damage during transport and storage.
 3. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete: Demolish in small sections. Using power-driven saw, cut concrete to a depth of at least 3/4 inch (19 mm) at junctures with construction to remain. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete.
- B. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, then remove concrete between saw cuts.
- C. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.
- D. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, then break up and remove.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.8 SELECTIVE DEMOLITION SCHEDULE

- A. Existing Items to Be Removed: Gate and fences at facilities entrance and driveway adjacent to Bar Rack Building on west end of site. Portion of asphaltic driveway at new grade beam location adjacent to Bar Rack Building. Sidewalk and fence as indicated on drawings along streetfront of the Primary Settlement Tanks and UV Treatment area. Sidewalk and fence at Digester Tank and Pelletizer building front yard. One flight on concrete steps at east side of Operations Building stoop. Sidewalk and fencing at front

yard of Operations Building. Fencing and barbed wire barricades where in conflict with new screen at and between the Secondary Tanks. Additional smaller items as per drawings.

- B. Existing Items to Be Removed and Salvaged: Any items identified by the facilities engineers / Owner during on-site meetings prior to demolition work or as indicated in writing from the owner or facilities engineers.
- C. Existing Items to Be Removed and Reinstalled: Overhead power and utility wires at Head House Building and Operations Building.
- D. Existing Items to Remain: All mechanical equipment and plumbing equipment for the water treatment facility. Tree screen between the Bar Rack Building and Head House Building. Sidewalks and driveways unless marked for demolition on the contract drawings. Flagpole in front of Digester Tank. Fence and mechanical equipment in driveway at loading dock of Operations Building. Trees and plants noted to remain on landscaping drawings. Also as per drawings.

END OF SECTION 02400

SECTION 02513 - ASPHALT CONCRETE PAVING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this section.

1.02 DESCRIPTION OF WORK:

- A. Extent of asphalt concrete paving work is shown on drawings.
- B. Prepared aggregate subbase is specified in earthwork sections.
- C. Saw-cutting of edges of existing pavement is specified in site clearing section.

1.03 SUBMITTALS:

- A. Material Certificates: Provide copies of materials certificates signed by material producer and Contractor, certifying that each material item complies with, or exceeds, specified requirements.

1.04 QUALITY ASSURANCE:

- A. Codes and Standards: Comply with New York State Dept. of Transportation standard specification, latest edition, and with local governing regulations if more stringent than herein specified.

1.05 SITE CONDITIONS:

- A. Weather Conditions: Construct asphalt concrete surface course when atmospheric temperature is above 40 deg. F (4 deg. C), and when base is dry. Base course may be placed when air temperature is above 30 deg. F (-1 deg. C) and rising.
- B. Grade Control: Establish and maintain required lines and elevations.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. General: Use locally available materials and gradations which exhibit a satisfactory record of previous installations.
- B. Base Course Aggregate: Sound, angular crushed stone, crushed gravel, or crushed slag, stone or slag screenings.
- C. Surface Course Aggregate: Crushed stone, crushed gravel, crushed slab, and sharp-edged natural sand.
- D. Asphalt Cement: AASHTO M 226 (ASTM D 3381) for viscosity-graded material and AASHTO M 20 (ASTM D 946) for penetration-graded material.

2.02 ASPHALT-AGGREGATE MIXTURE:

- A. Requirements:

Provide plant-mixed, hot-laid asphalt-aggregate mixture complying with ASTM D 3515 and as recommended by local paving authorities to suit project conditions.

PART 3 - EXECUTION

3.01 SURFACE PREPARATION:

- A. Remove loose material from compacted subbase surface immediately before paving.

Proof roll prepared subbase surface to check for unstable areas and areas requiring additional compaction.

Notify Contractor of unsatisfactory conditions. Do not begin paving work until deficient subbase areas have been corrected and are ready to receive paving.

3.02 PLACING MIX:

- A. General: Place asphalt concrete mixture on prepared surface, spread and strike-off. Spread

mixture at minimum temperature of 225 deg. F (107 deg. C). Place inaccessible and small areas by hand. Place course to required grade, cross-section, and compacted thickness.

- B. Paver Placing: Place in strips not less than 10' wide, unless otherwise acceptable to the Engineer. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete base course for a section before placing surface course.
- C. Joints: Make joints between old and new pavements, or between successive days' work, to ensure continuous bond between adjoining work. Construct joints to have same texture, density and smoothness as other sections of asphalt concrete course. Clean contact surfaces and apply tack coat.

3.03 ROLLING:

- A. General: Begin rolling when mixture will bear roller weight without excessive displacement.

Compact mixture with hot hand tampers or vibrating plate compactors in areas inaccessible to rollers.
- B. Breakdown Rolling: Accomplish breakdown or initial rolling immediately following rolling of joints and outside edge. Check surface after breakdown rolling, and repair displaced areas by loosening and filling, if required, with hot material.
- C. Second Rolling: Follow breakdown rolling as soon as possible, while mixture is hot. Continue second rolling until mixture has been thoroughly compacted.
- D. Finish Rolling: Perform finish rolling while mixture is still warm enough for removal of roller marks. Continue rolling until roller marks are eliminated and course has attained maximum density.
- E. Patching: Remove and replace paving areas mixed with foreign materials and defective areas. Cut-out suck areas and fill with fresh, hot asphalt concrete. Compact by rolling to maximum surface density and smoothness.
- F. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- G. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.04 FIELD QUALITY CONTROL:

- A. General: Test in-place asphalt concrete courses for compliance with requirements for thickness and surface smoothness. Repair or remove and replace unacceptable paving as directed by the Engineer.
- B. Thickness: In-place compacted thickness will not be acceptable if exceeding following allowable variation from required thickness:
 - 1. Base Course: 1/2" plus or minus.
 - 2. Surface Course: 1/4" plus or minus.
- C. Surface Smoothness: Test finished surface of each asphalt concrete course for smoothness, using 10' straightedge applied parallel with, and at right angles to centerline of paved area. Surfaces will not be acceptable if exceeding the following tolerances for smoothness.
 - 1. Base Course Surface: 1/4".
 - 2. Wearing Course Surface: 3/16"
 - 3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template 1/4".

Check surface areas at intervals as directed by the Engineer.

END OF SECTION 02513

SECTION 02900 – PLANTING

PART ONE GENERAL

1.1 Contract Provisions Incorporated by Reference

- A. The General Provisions of the Contract, including the General and Supplementary Conditions and Division 1, apply to the work specified in this Section.

1.2 Items Required but not Specified

- A. If an item or material of this trade is indicated in the Drawings but not specifically listed in this Section, provide such item or material at a standard of quality equal to the standard established for the balance of the Work specified.

1.3 Execution, Correlation and Intent

- A. In case of an inconsistency between Drawings and Specifications, or within either Document not clarified by addendum, the better quality or greater quantity of Work shall be provided.

1.4 Section Includes

- A. Planting required for the Work is indicated on the Drawings and, in general, includes planting of trees & shrubs throughout the Work including furnishing all materials, equipment, and labor necessary for root protection, and tree guards where applicable.

1.5 Related Work

Seeding Section 02950

1.6 Quality Assurance

- A. Qualifications of Workmen

Provide at least one person who shall be present at all times during execution of this portion of the Work, thoroughly familiar with the native plant materials being installed and the best methods of their installation, and direct all work performed under this Section.

Documentation of the qualifications of the person detailed above shall occur with the submission of a resume or relevant biographical information detailing the individual's relevant experience with native plant installation and requirements.

B. Standards

1. All plants and planting material shall meet or exceed the specifications of Federal and State laws requiring inspection for plant disease and insect control.
2. Quality and size shall conform to the current edition of "Horticultural Standards" for number one grade nursery stock, as adopted by the American Association of Nurserymen.
3. All plants shall be true to name and one of each bundle or lot shall be tagged with the name and size of the plants, in accordance with the standards of practice of the American Association of Nurserymen. In all cases, botanical names shall take precedence over common names.
4. Contractor shall provide a complete source list of each plant specified indicating nursery and/or supplier, type of plant, size and delivery schedule. All plants shall be tagged at the nursery for inspection and approval by Landscape Architect.
5. Contractor shall provide a unit price cost for each plant delivered according to species size and quality specified with a one-year guarantee to include the soil preparation, planting, mulching, watering, wrapping, staking and guying.
6. Contractor shall deep water all plants upon installation and water all plants including seeded areas three times a week until seeded areas are established at acceptable American Nursery standards as stated in the specifications.

1.7 Submittal

A. Certificates

1. All certificates required by law shall accompany shipments.
2. Upon completion of the installation, deliver all certificates to the Landscape Architect.

1.8 Product Handling

A. Delivery and Storage

1. Deliver all items to the site in their original containers with all labels intact and legible at time of Landscape Architect's inspection.
2. Immediately remove from the site all plants which are not true to name and all materials which do not comply with the provisions of this Section of these Specifications.

3. Use all means necessary to protect plant materials before, during and after installation and to protect the installed work and materials of all trades.

B. Replacements

1. In the event of damage or rejection, immediately make all repairs and replacements necessary at no additional cost to the Owner.

C. Planting Season

1. Planting shall be done within the following dates:

Deciduous material:	April 1 - June 15
	September 5 - October 31
Evergreen Material:	April 1 - June 1
	August 15 - October 15

2. If special conditions exist which may warrant a variance in the above planting dates, a written request shall be submitted to the Landscape Architect stating the special conditions and the proposed variance. Permission for the variance will be given if warranted in the opinion of the Landscape Architect. Variances permitted will not relieve the Contractor from liability for damages caused by planting out of season.

PART TWO - PRODUCTS

2.1 Bark Mulch

- A. Shredded cedar bark mulch shall consist of a standard size, free of chunks and pieces of wood thicker than 1/4". The mulch must be partially decomposed and dark brown in color.

2.2 Water

- A. Contractor shall make, at his expense, whatever arrangements may be necessary to ensure an adequate supply of water to meet the needs of this contract. He shall also furnish all necessary hose, equipment, attachments, and accessories for the adequate irrigation of lawns and planted areas as may be required to complete the work as specified.

2.3 Planting Soils

- A. The Contractor shall supply loamy fine sand which shall be prepared by the Contractor so as to be free from subsoil, stumps, roots, stones over one (1) inch diameter and other extraneous materials. Materials removed shall be disposed of by the Contractor. Soil shall not be used for planting while in a frozen or muddy condition.

- B. The Contractor shall supply loam and clay soils for the vernal pond only. The loam and clay shall be prepared by the Contractor so as to be free from subsoil, stumps, roots, stones over one (1) inch diameter and other extraneous materials. Materials removed shall be disposed of by the Contractor. Soil shall not be used for planting while in a frozen or muddy condition.

Mix all materials at the proportions or amounts specified herein. Mixing shall be done by an approved method. Under no conditions shall mixing be done if materials are wet or in otherwise unsatisfactory condition.

2.4 Plant Materials

- A. Plant materials shall be true to species and variety specified and shall be locally derived (from within 50 miles of the APBP) (see preferred supplier list, below), native pine barren species nursery grown in accordance with good horticultural practice under climatic conditions similar to those in the locality of the project for at least two years. They shall have been root-pruned within the last two years. All plants B&B or container grown. No heeled-in plants or plants from cold storage will be accepted.

Preferred List of Native Plant Nurseries:

Ernst Seed
9006 Mercer Pike
Meadville, PA 16335
(814) 336-2404
(814) 336-5191, fax
www.ernstseed.com

Meadville Land Service
10551 S. Watson Road
Meadville, PA 16335
(814) 337-1974
(814) 333-4214, fax
www.meadvillelandservice.com

North Creek Nurseries
388 North Creek Road
Landenberg, PA 19350
(610) 255-0100
(610) 255-4762, fax
www.northcreeknurseries.com

Pinelands Nursery
323 Island Road
Columbus, NJ 08022

(609) 291-9486
(609) 298-8939, fax
www.pinelandsnursery.com

RPM Ecosystems, LLC
2150 Dryden Road
Dryden, NY 13053 (607)844-9590
www.rpmecosystems.com

- B. Unless specifically noted otherwise, all plants shall be of specimen quality; exceptionally heavy; and symmetrical, so trained or favored in development and appearance as to be unquestionable and outstandingly superior in form, compactness and symmetry. They shall be sound; healthy; vigorous; well-branched and densely foliated when in leaf; free of disease; insects; eggs or larvae; and shall be free from physical damage or conditions that would prevent thriving growth.
- C. Plants shall not be pruned before delivery. Trees with multiple leaders, unless specified, will be rejected. Trees with a damaged or crooked leader, abrasion of bark, sunscalds, disfiguring knots, insect damage, or cuts of limbs over 3/4" in diameter, not completely calloused, will be rejected.
- D. Plants shall conform to measurements specified in the Plant Lists, except that plants larger than specified may be used. Use of such plants shall not increase the Contract price. If larger plants are approved, the root ball shall be increased in proportion to the size of the plant.
- E. Caliper measurement shall be taken on the trunk 6" above natural ground line for trees up to 4" in caliper and 12" above the natural ground line for trees over 4" in caliper. Height and spread dimensions specified refer to the main body of the plant and not from branch tip to tip. Plants shall be measured when branches are in their normal position. If a range of size is given, no plant shall be less than the minimum size, and not less than 50 percent of the plants shall be as large as the maximum size specified. Measurements specified are minimum size, acceptable after pruning where pruning is required. Plants that meet measurements but do not possess a normal balance between height and spread shall be rejected.
- F. All plants shall be labeled with correct plant name and size. Labels shall be attached securely to all plants, bundles, and containers of plant materials delivered with care that those attached directly to plants will not restrict growth.
- G. Substitutions of plant materials will not be permitted, unless authorized in writing by the Landscape Architect. If proof is submitted and substantiated in writing that any plant specified is not obtainable, a proposal will be considered for use of the nearest available size or similar variety with a corresponding adjustment of Contract price.
- H. Type of Protection to Roots.

1. Balled and Burlapped Plants

Plants designated "B&B" in the Plant List shall be balled and burlapped. They shall be dug with firm, natural balls of earth of sufficient diameter and depth to encompass the fibrous and feeding root system necessary for full recovery of the plant. Balls shall be firmly wrapped with burlap or similar material and bound with twine, cord, or wire mesh. Where necessary to prevent breaking or cracking of the ball during the process of planting, the ball may be secured to a platform.

2. Protection After Delivery

The balls of "B&B" plants and container grown plants which cannot be planted immediately on delivery shall be covered with moist soil or mulch, or other protection from drying winds and sun. All plants shall be watered as necessary until planted.

2.5 Inspections

- A. Certificate of inspection shall accompany invoices for each shipment of plants as may be required by law for transportation. File certificates with the Owner prior to acceptance of the material. Inspection by Federal or State Government at place of growth does not preclude rejection of plants at the work site.

2.6 Selection and Tagging

- A. Plants shall be subject to inspection and approval by the Landscape Architect at their place of growth and upon delivery for conformity to specification requirements. Such approval shall not impair the right of inspection and rejection during the progress of the work. A Contractor's representative shall be present at all inspections.
- B. Written requests for inspection of plant material at their place of growth shall be submitted to the Landscape Architect at least 10 calendar days prior to digging. Written requests shall state the place of growth and quantity of plants to be inspected. The Landscape Architect may refuse inspection at this time if, in his judgment, a sufficient quantity of plants are not available for inspection.
- C. Plants identified as "selection specimen" shall be approved and tagged at their place of growth. For distant material, submit photographs for pre-inspection review.

2.7 Plant Labels

- A. Plant labels shall be durable, legible stating the correct plant name and size in weather-resistant ink or embossed process lettering.

2.8 Guying, Staking and Wrapping Materials

- A. Guy wire: Shall be no. 12 gauge, galvanized, pliable zinc coated.
Hose: For use in covering wire shall be 1/2" diameter rubber hose with fiber lining, color black or brown. Used hose will be acceptable.
Stakes (upright): 2" x 4" x 8' wood free from weakening knots or other imperfections.
Tree wrap: Waterproof heavy crepe paper 4" wide or first quality burlap at least 8 ounces in weight and not less than 10" wide. Remove after 6 months.

2.9 Tree Paint - Not applicable.

2.10 Anti-Desiccant

- A. Anti-desiccant shall be an emulsion which provides a protective film over plant surfaces, permeable enough to permit transpiration. It shall be delivered in containers of the manufacturer and mixed according to the manufacturer's directions ("Wiltpruf" manufactured by Nursery Specialty Products Inc., Stubbings Road, Groton Falls, New York, or approved equal).

PART THREE EXECUTION

3.1 Surface Conditions

- A. Inspection
 - 1. Prior to all work of this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
 - 2. Verify that planting may be completed in accordance with the original design and reference standards.

3.2 Excavation of Planting Areas

- A. Stake out the ground locations for plants and outlines of areas to be planted and obtain approval of the Landscape Architect before excavation is begun. A minimum of 30 percent of total planting must be staked before inspection will be made.
- B. Excavate tree pits as shown on the Drawings.
- C. Combine subgrade soils with topsoil and soil amendments for use during planting operations.
- D. Notify the Landscape Architect in writing of all soil or drainage conditions which the Contractor considers detrimental to growth of plant material. State condition and submit proposal in writing to the Landscape Architect for correcting condition.

- E. Test drainage of suspect plant beds and pits by filling with water twice in succession. Conditions permitting the retention of water in planting beds for more than 12 hours shall be brought to the attention of the Landscape Architect.
- F. If rock, underground construction work, tree roots, or obstructions are encountered in the excavation of plant pits, alternate locations may be considered by the Landscape Architect. Where location cannot be changed, as determined by the Landscape Architect, submit cost required to remove the obstructions to a depth of not less than 6" below the required pit depth. Proceed with work after approval of the Landscape Architect.

3.3 Planting Operations

A. Planting Trees

1. Protect plants at all times from sun or drying winds. Plants that cannot be planted immediately on delivery shall be kept in the shade, well protected with soil, wet moss, or other acceptable material and shall be kept well watered. Plants shall not remain unplanted for longer than three days after delivery. Plants shall not be bound with wire or rope at any time so as to damage the bark or break branches. Plants shall be lifted and handled from the bottom of the ball only.
2. Set plants at same relationship to finished grade as they bore to the ground from which they were dug. Set plant plumb and brace rigidly in position until prepared topsoil has been tamped solidly around ball and roots.
3. Cut and remove ropes, strings and wrapping from top 1/3 of ball after plant has been set. Leave balance of wrappings intact around ball. If wrapping is plastic, remove top 2/3.
4. Backfill plant pits with prepared planting soil. When plant pits have been backfilled approximately 2/3 full, water thoroughly, eliminating all air pockets. After watering, install planting soil to top of pit and repeat watering.
5. Form saucer around tree as indicated on the Drawings.
6. Finish grade planting areas to conform to grades on Drawings.
7. Mulch all pits and beds with a 3" layer of shredded cedar mulch immediately after planting.
8. Immediately after planting, water all plants thoroughly.

B. Pruning

1. Prune plants only at time of planting and according to standard horticultural practice to preserve the natural character of the plant.

Pruning and trimming shall include the following:

- a) Remove all dead wood, suckers, and broken or badly bruised branches. Contractor shall not cut main leader of tree.
- b) Use only clean sharp tools.

- C. Guying and Staking: Immediately after planting, stake trees as indicated on drawing. Place stakes exercising care not to damage ball of earth. Guy trees to stakes near top of stake, with 2 strands of wire and encase guys in hose where they come in contact with trunk or where necessary to prevent damage to bark of tree, Draw guys taught through use of turnbuckles or similar method. Remove all stakes and guys at end of maintenance period.
- D. Wrap trunks with burlap or other approved wrapping securely tied or taped at the top and bottom and at 2' intervals along trunk. Cover entire surface to height of first branches with wrapping. Start wrapping at base of trees.

3.5 Maintenance of Trees and Shrubs

- A. Maintenance shall begin immediately after each plant is planted and shall continue until acceptance of the project by the Owner and final inspection or 60 days, whichever is longer.
- B. Maintenance shall consist of pruning, watering, cultivating, weeding, mulching, tightening and repairing guys, resetting plants to proper grades or upright position, restoration of the planting saucer, and furnishing and applying such sprays or other items as are necessary to keep the planting free of insects and disease and in thriving condition. Remove wrapping after 6 month or end of maintenance period, which ever is longer.
- C. Planting areas and plants shall be protected at all times against trespassing and damage of all kinds for the duration of the maintenance period. If any plants become damaged or injured, they shall be treated or replaced at no additional cost to the Owner.
- D. Provide all equipment and means for proper application of water to those planted areas not equipped with an irrigation system.

- 3.6 Inspection: In addition to normal progress inspection, schedule and conduct the following formal inspections, giving the Owner and Landscape Architect at least 24 hours prior to notice of readiness for inspection:

- A. Inspection of plants in containers prior to planting.
- B. Inspection of plant locations to verify compliance with the Drawings.
- C. Schedule the final inspection sufficiently in advance and in cooperation with the Owner and Landscape Architect so that the final inspection may be conducted within 24 hours after completion of planting.
- D. Final inspection will be at the end of the maintenance period, provided that all previous deficiencies have been corrected.

3.7 Acceptance

- A. The Owner shall inspect all work for acceptance upon written request of the Contractor. The request shall be received at least 10 calendar days before the anticipated date of inspection.

Acceptance of plant material by the Owner shall be for general conformance to specified size, character, and quality and shall not relieve the Contractor of responsibility for full conformance to the contract documents, including correct species.

Upon completion and reinspection of all repairs or renewals necessary in the judgment of the Owner, he shall certify in writing to the Contractor as to the acceptance of the work.

- B. Acceptance in Part

The work may be accepted in parts when it is deemed to be in the Owner's best interest to do so and when approval is given to the Contractor in writing to complete work in parts. Acceptance and use of such areas by the Owner shall not waive any other provisions of this Contract.

3.8 Guarantee Period and Replacements

- A. The guarantee period for trees and shrubs shall begin at the date of project substantial completion.
- B. All plant material shall be guaranteed by the Contractor for a period of one year from the date of project substantial completion to be in good health and flourishing condition.
- C. When work is accepted in parts, the guarantee periods extended from each of the partial acceptances to the terminal date of the last guarantee period. Thus, all guarantee periods terminate at one time.

- D. The Contractor shall replace, without cost to the Owner and as soon as possible as weather conditions permit and within a specified planting period, all dead plants and all plants not in a vigorous thriving condition. Plants shall be free of dead or dying branches and branch tips shall bear foliage of a normal density, size, and color. Replacements shall closely match adjacent specimens of the same species. Replacements shall be subject to all requirements stated in this Specification.
- E. The guarantee of all replacement plants shall extend for an additional period of one year from the date of their acceptance after replacement. In the event that a replacement plant is not acceptable during or at the end of the said extended guarantee period, the Owner may elect subsequent replacement or credit for each item.
- F. The Contractor shall make periodic inspection at no extra cost to the Owner during the guarantee period to determine what changes, if any, should be made to the Owner's maintenance program.

3.9 Care of Existing Trees

Upon completion of the work under this Section, all existing trees shall be pruned and any injuries repaired. The amount of pruning shall be limited to the minimum necessary to remove dead or injured twigs and branches and to compensate for the loss of roots as a result of construction operations. Roots greater than 2" shall be hand-cut to provide clean, concise, cutting and removal. Pruning shall be done in such a manner as not to change the natural habit or shape of the plant. All cuts shall be made at the branch collar, leaving no stubs. On all cuts over 3/4" diameter and bruises or scars on the bark, the injured cambium shall be traced back to living tissue and removed; wounds shall be smoothed and shaped so as not to retain water.

3.10 Clean-Up

- A. When any of this work is done while buildings are occupied, pavements shall be kept clear at all times, broom cleaned to prevent tracking dirt into buildings.
- B. After completion of all planting operations, dispose of all debris and excess material. All pavements shall be broomed and hosed clean.

3.11 Final Inspection and Acceptance

- A. At the end of guarantee period, the Owner will inspect all guaranteed work for final acceptance upon written request of the Contractor. The request shall be received at least 10 calendar days before the anticipated date for final inspection.

END OF SECTION 02900

SECTION 02950 – SEEDING

PART 1 - GENERAL

1.1 Contract Provisions Incorporated by Reference

- A. The General Provisions of the Contract, including the General and Supplementary Conditions and Division 1, apply to the work specified in this Section.

1.2 Items Required but not Specified

- A. If an item or material of this trade is indicated in the Drawings but not specifically listed in this Section, provide such item or material at a standard of quality equal to the standard established for the balance of the Work specified.

1.3 Execution, Correlation and Intent

- A. In case of an inconsistency between Drawings and Specifications, or within either Document not clarified by addendum, the better quality or greater quantity of Work shall be provided.

1.4 Section Includes

- A. Planting required for the Work is indicated on the Drawings and, in general, includes seeding construction disturbance and new lawn areas.

1.5 Related Work Described Elsewhere

Planting Section 02900

1.6 Quality Assurance

- A. Qualifications of Workmen

Provide at least one person who shall be present at all times during execution of this portion of the Work, be thoroughly familiar with the type of materials being installed and the best methods for their installation, and direct all work performed under this Section.

- B. Standards

- 1. All planting material shall meet or exceed the specifications of Federal and State laws requiring inspection for plant disease and insect control.

1. All planting material shall meet or exceed the specifications of Federal and State laws requiring inspection for plant disease and insect control.
2. Quality shall conform with the current edition of "Horticultural Standards" for number one grade nursery stock, as adopted by the American Association of Nurserymen. ANSI 2260.1 - Nursery Stock.

1.7 Submittals

A. Certificates

1. All certificates required by law shall accompany shipments.
2. Prior to installation, deliver all certificates to the Landscape Architect.

1.8 Product Handling

A. Delivery and Storage

1. Deliver all items to the site in their original containers with all labels intact and legible at time of Landscape Architect's inspection.
2. Immediately remove from the site all seeding materials which are not true to name and all materials which do not comply with the provisions of this Section of these Specifications.
3. Use all means necessary to protect seeding materials before, during, and after installation and to protect the installed work and materials of all other trades.

B. Replacements

1. In the event of damage or rejection, immediately make all repairs and replacements necessary at no additional cost to the Owner.

1.9 Planting Season

- A. Seeding shall be done between August 25th and October 15th and/or April 1st to June 1st.
- B. Variance - If special conditions exist which may warrant a variance in the above planting dates, a written request shall be submitted to the Owner stating the special conditions for the proposed variance. Regardless of the time of seeding or sodding, the Contractor shall be responsible for a full growth of grass.
- C. No work shall be permitted within ten (10) feet of the Karner Blue Butterfly Habitat Zone, as indicated on Existing Condition & Demolition Plan, Sheet SP 2, between

March 15 and October 15. No vehicular or pedestrian traffic or materials storage is permitted within this zone.

PART 2 - PRODUCTS

2.1 Topsoil

- A. General: Loamy fine sand, except that existing on the site, will not be made available by the Owner. The Contractor shall be responsible for supplying any additional loamy fine sand needed and hauling it to the site. It shall be obtained from naturally well-drained areas. It shall not be excessively acid or alkaline nor contain toxic substances which may be harmful to plant growth. Loamy fine sand shall be without admixture of subsoil and shall be cleaned and free from clay lumps, stones, stumps, roots, or similar substances one inch or more in diameter, debris, or other objects which might be a hindrance to planting operations. Furnish all loamy fine sand required to complete the work. Materials removed shall be disposed of by the Contractor.
- B. Testing: The Contractor shall take representative samples of loamy fine sand from the site and from loamy fine sand to be hauled in and shall submit samples to a Soil Testing Laboratory for chemical analysis, and physical analysis. The Contractor shall indicate to the testing agencies that turf is to be planted and who the Owner is. The Contractor shall forward to the Landscape Architect two copies of analysis and recommendations of the testing agencies.

2.2 Fertilizer

A. General

All fertilizer shall be a commercial balanced, 10-6-4 fertilizer delivered to the site in bags labeled with the manufacturer's guaranteed analysis.

B. Commercial Fertilizer

Commercial fertilizer shall be a complete fertilizer in which 50-70 percent of the nitrogenous elements shall be derived from organic sources; phosphate shall be derived from superphosphate containing 16-20 percent phosphoric acid or bonemeal containing 25-30 percent phosphoric acid and 2-3 percent nitrogen; and potash shall be derived from muriate of potash containing 55-60 percent potash. 12-4-8 50% organic may be substituted.

Fertilizer shall be mixed, as specified, and delivered to the site in standard, unopened containers showing weight, guaranteed analysis, and name of manufacturer.

C. Special Protection

If stored at site, protect fertilizer from the elements at all times.

2.3 Soil Amendments

- A. Limestone: Ground dolomitic limestone shall be an approved agricultural limestone and shall contain not less than 85 percent of total carbonates. Limestone shall be ground to such fineness that 50 percent will pass a 100 mesh sieve, and 90 percent will pass a 20 mesh sieve.

2.4 Grass Seed

A. General

All grass seed shall be:

1. Free from noxious weed seeds and recleaned.
2. Grade A recent crop seed.
3. Treated with appropriate fungicide at time of mixing.
4. Delivered to the site in sealed containers with dealer's guaranteed analysis.

B. Seed Mix Proportions by Weight

<u>% by Weight</u>	<u>Seed</u>	<u>% Purity</u>	<u>% Germination</u>
20%	Baron Bluegrass	90%	75%
20%	Ram I Bluegrass	85%	75%
40%	Touchdown Bluegrass	90%	75%
5%	Annual Ryegrass	98%	90%
15%	Yorktown II Perennial Ryegrass	98%	90%

Weed seed content shall not exceed 0.25%. Wet, moldy, or otherwise damaged seed will be rejected.

PART 3 - EXECUTION

3.1 Surface Conditions

A. Inspection

1. Prior to all work of this Section, carefully inspect the installed work of all other trades, and verify that all such work is complete to the point where this installation may properly commence.

2. Verify that seeding may be completed in accordance with the original design and the reference standards.

3.2 Subgrade Preparation

- A. The Contractor shall do whatever grading is necessary to bring the subgrade to a true, smooth slope, parallel and 4" below finished grade, for all seed bed areas. Remove all existing lawns and grasses, including roots.
- B. There must be sufficient grade staked to insure correct line and grade of subgrade of finished grade.
- C. Immediately prior to being covered with topsoil, the top 3" of the subgrade shall be raked or otherwise loosened and shall be free of stones, rock, and other foreign material 2" or greater in dimensions.

3.3 Finish Grade Preparation

- A. Loamy fine sand shall not be delivered or worked in a frozen or muddy condition.
- B. Loamy fine sand shall be placed and spread over approved areas to a depth sufficiently greater than 4" in "meadow" and "lawn" areas so that after natural settlement and light rolling, the completed work will conform to the lines, grades, and elevations indicated.
- C. After loamy fine sand has been spread in approved areas, it shall be carefully prepared by scarifying or harrowing, and stones over one inch in diameter shall be removed from the loamy fine sand. It shall be free of smaller stones in excessive quantities.
- D. The whole surface shall then be rolled with a roller which weighs not more than 100 pounds per foot of width. During the rolling, all depressions caused by settlement of rolling shall be filled with additional loamy fine sand, and the surface shall be re-graded and rolled until presenting a smooth and even finish to the required grade.

3.4 Seed Bed Preparation

- A. After the areas to be seeded have been brought to the grades specified, spread limestone at a rate of 50 pounds per 1,000 square feet.
- B. Apply the 10-6-4 fertilizer at a rate of 15 pounds per 1,000 square feet. Thoroughly and evenly incorporate fertilizer and lime with the soil to a depth of 3" by discing or other approved method. In areas inaccessible to power equipment, use hand tools. Adjacent to trees and shrubs, use hand tools to avoid disturbances of the roots.

- C. The Contractor shall reconstitute the soil, as may be recommended by a soil testing agency, prior to use as planting soil. Any deficiencies in the loamy fine sand shall be corrected by the Contractor, as recommended, at no expense to the Owner.
- D. After incorporation of fertilizer and lime into the soil, the seed bed shall be fine graded to remove all ridges and depressions and the surface cleared of all debris and of all stones one inch or more in diameter.

3.5 Seeding

- A. Immediately before seeding, the ground shall be restored, as necessary, to a loose friable condition by discing or other approved method to a depth of not less than 2". The surface shall be cleared of all debris and of all stone 1" or more in diameter.
- B. Seed all areas to be seeded with specified grass seed, sowing evenly with an approved mechanical seeder at the rate of 6 pounds per 1,000 square feet. Spread seed when soil is moist. Cultipacker, or approved similar equipment, may be used to cover the seed and to firm the seed bed in one operation. In areas inaccessible to cultipacker, the seeded ground shall be lightly raked and rolled in two directions with a water ballast roller. Extreme care shall be taken during seeding and raking to insure that no change shall occur in the finished grades and that the seed is not raked from one spot to another.
- C. Promptly after seeding, wet the seed bed thoroughly, keeping all areas moist throughout the germination or establishment period.
- D. Mulch shall be placed immediately after seeding. Clean straw that has been thoroughly fluffed shall be spread evenly and uniformly at the rate of two to three tons per acre or (2) 50 lb. bales per 1,000 sq. ft. of area. Lumps and thick mulch materials shall be thinned. All mulch anchor stakes, strings and matting shall be removed before final acceptance of lawns.
- E. Take whatever measures are necessary to protect the seeded area while it is germinating. These measures shall include furnishing warning signs, barriers, and other needed measures of protection.

3.6 Maintenance

- A. Maintenance shall begin immediately after seeding operations and shall continue until Acceptance or for a minimum of 60 days, whichever is longer.
- B. Maintenance of seed areas shall consist of watering, weeding, mowing/raking, repair of all erosion, and reseeding as necessary to establish a uniform stand of grass.

Lawns shall be watered daily to maintain adequate surface soil moisture for proper seed germination. Continue daily watering for not less than 30 days. Thereafter

apply ½" of water twice per week until acceptance. All areas which fail to show a uniform stand of grass for any reason shall be reseeded repeatedly until a uniform stand is attained.

At the time of the first cutting, there shall be a uniform stand between 3 and 3-1/2" high, and mower blades shall be set between 2-1/2" and 3" high.

Catch shall be representative of seed specified.

- 3.7 Acceptance: The Owner shall inspect all work for Acceptance upon written request of the Contractor. The request shall be received at least 10 calendar days before the anticipated date of inspection. Upon completion and re-inspection of all repairs or renewals necessary in the judgment of the Owner, he shall certify in writing to the Contractor as to the Acceptance of the work.
- 3.8 Acceptance in Part: The work may be accepted in parts when it is deemed to be in the Owner's best interest to do so and when approval is given to the Contractor in writing to complete the work in parts. Acceptance and use of such areas by the Owner shall not waive any other provisions of this Contract.
- 3.9 Final Inspection and Acceptance: At the end of the guarantee period, the Owner will inspect all guaranteed work for the Final Acceptance upon written request of the Contractor. The request shall be received at least 10 calendar days before the anticipated date for final inspection.

END OF SECTION 02950

SECTION 03300 – CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:
 - 1. Footings.
 - 2. Foundation walls.
 - 3. Slabs-on-grade.
 - 4. Suspended slabs.
 - 5. Concrete toppings.

1.3 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
 - 1. Design Mixtures for Credit ID 1.1: For each concrete mixture containing fly ash as a replacement for portland cement or other portland cement replacements, and for equivalent concrete mixtures that do not contain portland cement replacements.
- B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
 - 1. Indicate amounts of mixing water to be withheld for later addition at Project site.

- C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.
- D. Construction Joint Layout: Indicate proposed construction joints required to construct the structure.
 - 1. Location of construction joints is subject to approval of the Architect.
- E. Samples: For waterstops vapor retarder.
- F. Material Certificates: For each of the following, signed by manufacturers:
 - 1. Cementitious materials.
 - 2. Admixtures.
 - 3. Form materials and form-release agents.
 - 4. Steel reinforcement and accessories.
 - 5. Waterstops.
 - 6. Curing compounds.
 - 7. Floor and slab treatments.
 - 8. Bonding agents.
 - 9. Adhesives.
 - 10. Vapor retarders.
 - 11. Semirigid joint filler.
 - 12. Joint-filler strips.
 - 13. Repair materials.
- G. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:
 - 1. Aggregates.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
 - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
- B. Testing Agency Qualifications: An independent agency, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
 - 1. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician - Grade I.

Testing Agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician - Grade II.

- C. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.
- D. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
 - 1. ACI 301, "Specifications for Structural Concrete," Sections 1 through 5 and Section 7, "Lightweight Concrete."
 - 2. ACI 315, The ACI Detailing Manual
 - 3. ACI 318, Latest edition, The ACI Building Code
 - 4. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
 - 5. ACI Detailing Manual SP-66 (Latest Revision), for all detailing, fabrication and placing of reinforcing bars.
- E. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage.
- B. Waterstops: Store waterstops under cover to protect from moisture, sunlight, dirt, oil, and other contaminants.

PART 2 - PRODUCTS

2.1 FORM-FACING MATERIALS

- A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
 - 1. Plywood, metal, or other approved panel materials.
- B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

- C. Forms for Cylindrical Columns, Pedestals, and Supports: Metal, glass-fiber-reinforced plastic, paper, or fiber tubes that will produce surfaces with gradual or abrupt irregularities not exceeding specified formwork surface class. Provide units with sufficient wall thickness to resist plastic concrete loads without detrimental deformation.
- D. Pan-Type Forms: Glass-fiber-reinforced plastic or formed steel, stiffened to resist plastic concrete loads without detrimental deformation.
- E. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch, minimum.
- F. Rustication Strips: Wood, metal, PVC, or rubber strips, kerfed for ease of form removal.
- G. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
 - 1. Formulate form-release agent with rust inhibitor for steel form-facing materials.
- H. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
 - 1. Furnish ties that, when removed, will leave holes no larger than 1 inch in diameter in concrete surface.

2.2 STEEL REINFORCEMENT

- A. Recycled Content of Steel Products: Provide products with an average recycled content of steel products so postconsumer recycled content plus one-half of preconsumer recycled content is not less than 25 percent.
- B. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
- C. Steel Bar Mats: ASTM A 184/A 184M, fabricated from ASTM A 615/A 615M, Grade 60, deformed bars, assembled with clips.
- D. Plain-Steel Wire: ASTM A 82/A 82M, galvanized.
- E. Deformed-Steel Wire: ASTM A 496/A 496M.
- F. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, plain, fabricated from as-drawn steel wire into flat sheets.
- G. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.

- H. Galvanized-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, plain, fabricated from galvanized-steel wire into flat sheets.

2.3 REINFORCEMENT ACCESSORIES

- A. Joint Dowel Bars: ASTM A 615/A 615M, Grade 60, plain-steel bars, cut true to length with ends square and free of burrs.
- B. Epoxy-Coated Joint Dowel Bars: ASTM A 615/A 615M, Grade 60, plain-steel bars, ASTM A 775/A 775M epoxy coated.
- C. Epoxy Repair Coating: Liquid, two-part, epoxy repair coating; compatible with epoxy coating on reinforcement and complying with ASTM A 775/A 775M.
- D. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:
 - 1. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless-steel bar supports.

2.4 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
 - 1. Portland Cement: ASTM C 150, Type I/II,.
 - a. Fly Ash: ASTM C 618, Class F.
 - b. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.
- B. Normal-Weight Aggregates: ASTM C 33, Class 3S coarse aggregate or better, graded. Provide aggregates from a single source.
 - 1. Maximum Coarse-Aggregate Size: 3/4 inch nominal.
 - 2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
- C. Lightweight Aggregate: ASTM C 330, 3/4-inch nominal maximum aggregate size.
- D. Water: ASTM C 94/C 94M and potable.

2.5 ADMIXTURES

- A. Air-Entraining Admixture: ASTM C 260.
- B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
 - 1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
 - 2. Retarding Admixture: ASTM C 494/C 494M, Type B.
 - 3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
 - 4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
 - 5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
 - 6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

2.6 WATERSTOPS

- A. Flexible PVC Waterstops: CE CRD-C 572, for embedding in concrete to prevent passage of fluids through joints. Factory fabricate corners, intersections, and directional changes.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. BoMetals, Inc.
 - b. Greenstreak.
 - c. Paul Murphy Plastics Company.
 - d. Vinylex Corp.
 - 2. Profile: Ribbed with center bulb.
 - 3. Dimensions: 6 inches by 3/8 inch thick; nontapered.

2.7 VAPOR RETARDERS

- A. Sheet Vapor Retarder: ASTM E 1745, Class A. Include manufacturer's recommended adhesive or pressure-sensitive tape.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Grace Construction Products, W. R. Grace & Co.; Florprufe 120.
 - b. Meadows, W. R., Inc.; Perminator 15 mil.
 - c. Raven Industries Inc.; Vapor Block 15.

- d. Reef Industries, Inc.; Griffolyn Type-105.
- e. Stego Industries, LLC; Stego Wrap 15 mil Class A.

2.8 CURING MATERIALS

- A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.
- B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- C. Water: Potable.
- D. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Anti-Hydro International, Inc.; AH Curing Compound #2 DR WB.
 - b. Dayton Superior Corporation; Day-Chem Rez Cure (J-11-W).
 - c. Euclid Chemical Company (The), an RPM company; Kurez W VOX; TAMMSCURE WB 30C.
 - d. Lambert Corporation; AQUA KURE - CLEAR.
 - e. L&M Construction Chemicals, Inc.; L&M Cure R.
 - f. Meadows, W. R., Inc.; 1100-CLEAR.

2.9 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.
- B. Semirigid Joint Filler: Two-component, semirigid, 100 percent solids, aromatic polyurea with a Type A shore durometer hardness range of 90 to 95 per ASTM D 2240.
- C. Bonding Agent: ASTM C 1059/C 1059M, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
- D. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class suitable for application temperature and of grade to suit requirements, and as follows:
 - 1. Types IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

- E. Reglets: Fabricate reglets of not less than 0.022-inch- thick, galvanized-steel sheet. Temporarily fill or cover face opening of reglet to prevent intrusion of concrete or debris.
- F. Dovetail Anchor Slots: Hot-dip galvanized-steel sheet, not less than 0.034 inch thick, with bent tab anchors. Temporarily fill or cover face opening of slots to prevent intrusion of concrete or debris.

2.10 REPAIR MATERIALS

- A. Repair Underlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch and that can be feathered at edges to match adjacent floor elevations.
 - 1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
 - 2. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
 - 3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand as recommended by underlayment manufacturer.
 - 4. Compressive Strength: Not less than 4100 psi at 28 days when tested according to ASTM C 109/C 109M.
- B. Repair Overlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/4 inch and that can be filled in over a scarified surface to match adjacent floor elevations.
 - 1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
 - 2. Primer: Product of topping manufacturer recommended for substrate, conditions, and application.
 - 3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand as recommended by topping manufacturer.
 - 4. Compressive Strength: Not less than 5000 psi at 28 days when tested according to ASTM C 109/C 109M.

2.11 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
 - 1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.
- B. Cementitious Materials: Use fly ash, pozzolan, ground granulated blast-furnace slag, and silica fume as needed to reduce the total amount of portland cement, which would

otherwise be used, by not less than 40 percent. For concrete exposed to deicing chemicals, i.e. at hanger door foundation, limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

1. Fly Ash: 25 percent.
 2. Combined Fly Ash and Pozzolan: 25 percent.
 3. Ground Granulated Blast-Furnace Slag: 50 percent.
 4. Combined Fly Ash or Pozzolan and Ground Granulated Blast-Furnace Slag: 50 percent portland cement minimum, with fly ash or pozzolan not exceeding 25 percent.
 5. Silica Fume: 10 percent.
 6. Combined Fly Ash, Pozzolans, and Silica Fume: 35 percent with fly ash or pozzolans not exceeding 25 percent and silica fume not exceeding 10 percent.
 7. Combined Fly Ash or Pozzolans, Ground Granulated Blast-Furnace Slag, and Silica Fume: 50 percent with fly ash or pozzolans not exceeding 25 percent and silica fume not exceeding 10 percent.
- C. Limit water-soluble, chloride-ion content in hardened concrete to 0.30 percent by weight of cement.
- D. Admixtures: Use admixtures according to manufacturer's written instructions.
1. Use water-reducing high-range water-reducing or plasticizing admixture in concrete, as required, for placement and workability.
 2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
 3. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.

2.12 CONCRETE MIXTURES FOR BUILDING ELEMENTS

- A. Footings: Proportion normal-weight concrete mixture as follows:
1. Minimum Compressive Strength: 4000 psi at 28 days.
 2. Maximum Water-Cementitious Materials Ratio: 0.50.
 3. Slump Limit: 4 inches, plus or minus 1 inch.
 4. Air Content: 5 percent, plus or minus 1 percent at point of delivery.
- B. Foundation Walls and piers not exposed to de-icing compounds: Proportion normal-weight concrete mixture as follows:
1. Minimum Compressive Strength: 4000 psi at 28 days.
 2. Maximum Water-Cementitious Materials Ratio: 0.50.

3. Slump Limit: 8 inches for concrete with verified slump of 2 to 4 inches before adding high-range water-reducing admixture or plasticizing admixture, plus or minus 1 inch.
 4. Air Content: 5 percent, plus or minus 1 percent at point of delivery for 3/4-inch nominal maximum aggregate size.
- C. Foundation Walls and piers exposed to de-icing compounds: Proportion normal-weight concrete mixture as follows:
1. Minimum Compressive Strength: 4500 psi at 28 days.
 2. Maximum Water-Cementitious Materials Ratio: 0.40.
 3. Slump Limit: 8 inches for concrete with verified slump of 2 to 4 inches before adding high-range water-reducing admixture or plasticizing admixture, plus or minus 1 inch.
 4. Air Content: 5 percent, plus or minus 1 percent at point of delivery for 3/4-inch nominal maximum aggregate size.
- D. Slabs-on-Grade: Proportion normal-weight concrete mixture as follows:
1. Minimum Compressive Strength: 4000 psi at 28 days.
 2. Minimum Cementitious Materials Content: 540 lb/cu. yd.
 3. Slump Limit: 4 inches, plus or minus 1 inch.
 4. Air Content: 5 percent, plus or minus 1 percent at point of delivery.
 5. Air Content: Do not allow air content of trowel-finished floors to exceed 3 percent.
 6. Maximum Water-Cementitious Materials Ratio: 0.45.
- E. Suspended Slabs: Proportion structural lightweight concrete mixture as follows:
1. Minimum Compressive Strength: 4500 psi at 28 days.
 2. Calculated Equilibrium Unit Weight: 115 lb/cu. ft., plus or minus 3 lb/cu. ft. as determined by ASTM C 567.
 3. Slump Limit: 3 inches, plus or minus 1 inch.
 4. Air Content: 6 percent, plus or minus 2 percent at point of delivery for nominal maximum aggregate size greater than 3/8 inch.
 5. Air Content: Do not allow air content of trowel-finished floors to exceed 3 percent.

2.13 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.14 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.
- B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Mix concrete materials in appropriate drum-type batch machine mixer.
1. For mixer capacity of 1 cu. yd. or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
 2. For mixer capacity larger than 1 cu. yd., increase mixing time by 15 seconds for each additional 1 cu. yd..
 3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mixture type, mixture time, quantity, and amount of water added. Record approximate location of final deposit in structure.

PART 3 - EXECUTION

3.1 FORMWORK

- A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.
- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
- C. Limit concrete surface irregularities, designated by ACI 347 as abrupt or gradual, as follows:
1. Class A, 1/8 inch for smooth-formed finished surfaces.
 2. Class C, 1/2 inch for rough-formed finished surfaces.
- D. Construct forms tight enough to prevent loss of concrete mortar.
- E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
1. Install keyways, reglets, recesses, and the like, for easy removal.
 2. Do not use rust-stained steel form-facing material.

- F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
- G. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.
- H. Chamfer exterior corners and edges of permanently exposed concrete. Provide 3/4" chamfer.
- I. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
- J. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- K. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- L. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.2 EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 - 1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC's "Code of Standard Practice for Steel Buildings and Bridges."
 - 2. Install reglets to receive waterproofing and to receive through-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, shelf angles, and other conditions.
 - 3. Install dovetail anchor slots in concrete structures as indicated.
 - 4. Dowels from foundations or slabs to walls shall match wall reinforcing, unless otherwise noted. Dowels shall be placed before concrete is poured. Dowels shall not be pushed into the concrete.

3.3 REMOVING AND REUSING FORMS

- A. General: All concrete formwork shall remain place for a minimum 7 days and conform to ACI Hot and Cold Weather Concreting requirements as necessary.

1. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.
- B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.
- C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

3.4 VAPOR RETARDERS

- A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.
 1. Lap joints 6 inches and seal with manufacturer's recommended tape.
- B. Bituminous Vapor Retarders: Place, protect, and repair bituminous vapor retarder according to manufacturer's written instructions.

3.5 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.
- C. Accurately position, support, and secure reinforcement against displacement. All reinforcing bars shall be securely held in place while pouring concrete. If required, additional bars or stirrups shall be furnished by the contractor to provide proper support for all bars. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars. **NO WELDING OF REINFORCING BARS WILL BE PERMITTED.**
 1. The following minimum concrete cover to reinforcement shall be provided for footings: 3".
- D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- E. Install welded wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing.

Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

- F. Lap all bars minimum 48 diameters unless otherwise noted on drawings. Lap all WWF a minimum of 12 inches unless otherwise noted on drawings.
- G. All mechanical couplers shall develop 1.25 f_y of rebar in tension or compression and comply with ACI 318.

3.6 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
 - 1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.
 - 2. Form keyed joints as indicated. Embed keys at least 1-1/2 inches into concrete.
 - 3. Space vertical joints in walls thirty feet on center. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.
 - 4. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
- C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:
 - 1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
 - 2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.
- D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
 - 1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated.

2. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.
- E. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt coat one-half of dowel length to prevent concrete bonding to one side of joint.

3.7 WATERSTOPS

- A. Flexible Waterstops: Install in construction joints and at other joints indicated to form a continuous diaphragm. Install in longest lengths practicable. Support and protect exposed waterstops during progress of the Work. Field fabricate joints in waterstops according to manufacturer's written instructions.

3.8 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
- B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Structural Engineer or Architect.
 1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- C. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
 1. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
 2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
 3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
- D. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.

1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 2. Maintain reinforcement in position on chairs during concrete placement.
 3. Screed slab surfaces with a straightedge and strike off to correct elevations.
 4. Slope surfaces uniformly to drains where required.
 5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.
- E. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
1. When average high and low temperature is expected to fall below 40 deg F for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
 2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.
- F. Hot-Weather Placement: Comply with ACI 301 and as follows:
1. Maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
 2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

3.9 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
1. Apply to concrete surfaces not exposed to public view.
- B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
1. Apply to concrete surfaces exposed to public view.

C. Rubbed Finish: Apply the following to smooth-formed finished as-cast concrete where indicated:

1. Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.
2. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix one part portland cement to one and one-half parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.
3. Cork-Floated Finish: Wet concrete surfaces and apply a stiff grout. Mix one part portland cement and one part fine sand with a 1:1 mixture of bonding agent and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Compress grout into voids by grinding surface. In a swirling motion, finish surface with a cork float.

D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.10 FINISHING FLOORS AND SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, restraighening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbied. Use stiff brushes, brooms, or rakes to produce a profile amplitude of 1/4 inch in one direction.

1. Apply scratch finish to surfaces to receive mortar setting beds for bonded cementitious floor finishes.

C. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraighening until surface is left with a uniform, smooth, granular texture.

1. Apply float finish to surfaces indicated.

D. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighen

until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.

1. Apply a trowel finish to surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finish coating system.
 2. Finish surfaces to the following tolerances, according to ASTM E 1155, for a randomly trafficked floor surface:
 3. Finish and measure surface so gap at any point between concrete surface and an unlevelled, freestanding, 10-ft.- long straightedge resting on two high spots and placed anywhere on the surface does not exceed 1/8 inch.
- E. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces where ceramic or quarry tile is to be installed by either thickset or thin-set method. While concrete is still plastic, slightly scarify surface with a fine broom.
1. Comply with flatness and levelness tolerances for trowel-finished floor surfaces.
- F. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and elsewhere as indicated.
1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.
- G. Slip-Resistive Finish: Before final floating, apply slip-resistive aluminum granule finish where indicated and to concrete stair treads, platforms, and ramps. Apply according to manufacturer's written instructions and as follows:
1. Uniformly spread 25 lb/100 sq. ft. of dampened slip-resistive aluminum granules over surface in one or two applications. Tamp aggregate flush with surface, but do not force below surface.
 2. After broadcasting and tamping, apply float finish.
 3. After curing, lightly work surface with a steel wire brush or an abrasive stone and water to expose slip-resistive aluminum granules.

3.11 MISCELLANEOUS CONCRETE ITEMS

- A. Filling In: Fill in holes and openings left in concrete structures after work of other trades is in place unless otherwise indicated. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.

- B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.
- C. Equipment Bases and Foundations: Provide machine and equipment bases and foundations as shown on Drawings. Set anchor bolts for machines and equipment at correct elevations, complying with diagrams or templates from manufacturer furnishing machines and equipment.

3.12 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
- B. New concrete slabs shall be protected from loss of surface moisture for not less than seven (7) days by using a curing compound conforming to ASTM C309 or by we burlap or a plastic membrane. Curing shall be in accordance with ACI Specifications.
- C. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- D. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.
- E. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.
- F. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
 - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
 - 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides

and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

- a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.
 - b. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
 - c. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer certifies will not interfere with bonding of floor covering used on Project.
3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
 - a. Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound will not interfere with bonding of floor covering used on Project.
 4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.
- G. Sealing Coat: Uniformly apply a continuous sealing coat of curing and sealing compound to hardened concrete by power spray or roller according to manufacturer's written instructions.

3.13 JOINT FILLING

- A. Prepare, clean, and install joint filler according to manufacturer's written instructions.
 1. Defer joint filling until concrete has aged at least six month(s). Do not fill joints until construction traffic has permanently ceased.
- B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joint clean and dry.
- C. Install semirigid joint filler full depth in saw-cut joints and at least 2 inches deep in formed joints. Overfill joint and trim joint filler flush with top of joint after hardening.

3.14 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.
- B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part portland cement to two and one-half parts fine aggregate passing a No. 16 sieve, using only enough water for handling and placing.
- C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
 - 1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch in any dimension to solid concrete. Limit cut depth to 3/4 inch. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
 - 2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
 - 3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Architect.
- D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.
 - 1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
 - 2. After concrete has cured at least 14 days, correct high areas by grinding.
 - 3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
 - 4. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.

5. Repair defective areas, except random cracks and single holes 1 inch or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least a 3/4-inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mixture as original concrete except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
 6. Repair random cracks and single holes 1 inch or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.
- E. Perform structural repairs of concrete, subject to Architect's approval, using epoxy adhesive and patching mortar.
- F. Repair materials and installation not specified above may be used, subject to Architect's approval.

3.15 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Owner will engage a special inspector and qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Inspections:
1. Steel reinforcement placement.
 2. Steel reinforcement welding.
 3. Headed bolts and studs.
 4. Verification of use of required design mixture.
 5. Concrete placement, including conveying and depositing.
 6. Curing procedures and maintenance of curing temperature.
- C. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
1. Testing Frequency: Obtain at least one composite sample for each 50 cu. yd. or fraction thereof of each concrete mixture placed each day.
 - a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.

2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
3. Air Content: ASTM C 231, pressure method, for normal-weight concrete; ASTM C 173/C 173M, volumetric method, for structural lightweight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
4. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F and below and when 80 deg F and above, and one test for each composite sample.
5. Unit Weight: ASTM C 567, fresh unit weight of structural lightweight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
6. Compression Test Specimens: ASTM C 31/C 31M.
 - a. Cast and laboratory cure two sets of two standard cylinder specimens for each composite sample.
7. Compressive-Strength Tests: ASTM C 39/C 39M; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.
 - a. Test one set of two field-cured specimens at 7 days and one set of two specimens at 28 days.
 - b. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
8. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
9. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
10. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
11. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods as directed by Architect.

12. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
13. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

END OF SECTION 03300

SECTION 05120 - STRUCTURAL STEEL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Structural steel.
 - 2. Prefabricated building columns.
 - 3. Grout.

1.3 DEFINITIONS

- A. Structural Steel: Elements of structural-steel frame, as classified by AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."
- B. Seismic-Load-Resisting System: Elements of structural-steel frame designated as "SLRS" or along grid lines designated as "SLRS" on Drawings, including columns, beams, and braces and their connections.
- C. Heavy Sections: Rolled and built-up sections as follows:
 - 1. Shapes included in ASTM A 6/A 6M with flanges thicker than 1-1/2 inches.
 - 2. Welded built-up members with plates thicker than 2 inches.
 - 3. Column base plates thicker than 2 inches.
- D. Protected Zone: Structural members or portions of structural members indicated as "Protected Zone" on Drawings. Connections of structural and nonstructural elements to protected zones are limited.
- E. Demand Critical Welds: Those welds, the failure of which would result in significant degradation of the strength and stiffness of the Seismic-Load-Resisting System and which are indicated as "Demand Critical" or "Seismic Critical" on Drawings.

1.4 PERFORMANCE REQUIREMENTS

- A. Connections: Provide details of simple shear connections required by the Contract Documents to be selected or completed by structural-steel fabricator, including comprehensive engineering design by a qualified professional engineer, to withstand loads indicated and comply with other information and restrictions indicated.
 - 1. Select and complete connections using schematic details indicated and AISC 360 Insert source.
 - 2. Use ASD; data are given at service-load level.
- B. Moment Connections: Type FR, fully restrained.
- C. Construction: Moment frame.

1.5 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show fabrication of structural-steel components.
 - 1. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
 - 2. Include embedment drawings.
 - 3. Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.
 - 4. Indicate type, size, and length of bolts, distinguishing between shop and field bolts. Identify pretensioned and slip-critical high-strength bolted connections.
 - 5. For structural-steel connections indicated to comply with design loads, include structural design data signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Welding Procedure Specifications (WPSs) and Procedure Qualification Records (PQRs): Provide according to AWS D1.1/D1.1M, "Structural Welding Code - Steel," for each welded joint whether prequalified or qualified by testing, including the following:
 - 1. Power source (constant current or constant voltage).
 - 2. Electrode manufacturer and trade name, for demand critical welds.
- D. Qualification Data: For qualified Installer and fabricator.
- E. Welding certificates.
- F. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers, certifying that shop primers are compatible with topcoats.

- G. Mill test reports for structural steel, including chemical and physical properties.
- H. Product Test Reports: For the following:
 - 1. Bolts, nuts, and washers including mechanical properties and chemical analysis.
 - 2. Direct-tension indicators.
 - 3. Tension-control, high-strength bolt-nut-washer assemblies.
 - 4. Shear stud connectors.
 - 5. Shop primers.
 - 6. Nonshrink grout.
- I. Source quality-control reports.

1.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category STD.
- B. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- C. Comply with applicable provisions of the following specifications and documents:
 - 1. AISC 303.
 - 2. AISC 341 and AISC 341s1.
 - 3. AISC 360.
 - 4. RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.
 - 1. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.
- B. Store fasteners in a protected place in sealed containers with manufacturer's labels intact.
 - 1. Fasteners may be repackaged provided Owner's testing and inspecting agency observes repackaging and seals containers.
 - 2. Clean and relubricate bolts and nuts that become dry or rusty before use.

3. Comply with manufacturers' written recommendations for cleaning and lubricating ASTM F 1852 fasteners and for retesting fasteners after lubrication.

1.8 COORDINATION

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

PART 2 - PRODUCTS

2.1 STRUCTURAL-STEEL MATERIALS

- A. All steel and connections shall be galvanized.
- B. Recycled Content of Steel Products: Provide products with an average recycled content of steel products so postconsumer recycled content plus one-half of pre-consumer recycled content is not less than 25 percent.
- C.
- D.
- E. Recycled Content of Steel Products: Provide products with an average recycled content of steel products so postconsumer recycled content plus one-half of pre-consumer recycled content is not less than the following:
 1. W-Shapes: 60 percent.
 2. Channels, Angles, M , S-Shapes: 60 percent.
 3. Plate and Bar: 25 percent.
 4. Cold-Formed Hollow Structural Sections: 25 percent.
 5. Steel Pipe: 25 percent.
 6. All Other Steel Materials: 25 percent.
- F. W-Shapes: ASTM A 992/A 992M. $F_y=50\text{KSI}$
- G. Channels, Angles, M , S-Shapes: ASTM A 36/A 36M. $F_y=36\text{KSI}$
- H. Plate and Bar: ASTM A 36/A 36M. $F_y=36\text{KSI}$
- I. Cold-Formed Hollow Structural Sections: ASTM A 500, Grade B, structural tubing. $F_y=46\text{KSI}$

- J. Steel Pipe: ASTM A 53/A 53M, Type E or S, Grade B. $F_y=35\text{KSI}$
 - 1. Weight Class: Standard.
 - 2. Finish: Black except where indicated to be galvanized.
- K. Steel Castings: ASTM A 216/A 216M, Grade WCB with supplementary requirement S11.
- L. Steel Forgings: ASTM A 668/A 668M.
- M. Welding Electrodes: Comply with AWS requirements.

2.2 BOLTS, CONNECTORS, AND ANCHORS

- A. High-Strength Bolts, Nuts, and Washers: 3/4" diameter, ASTM A 325, Type 1, heavy-hex steel structural bolts; ASTM A 563, Grade C, heavy-hex carbon-steel nuts; and ASTM F 436, Type 1, hardened carbon-steel washers; all with plain finish.
 - 1. Direct-Tension Indicators: ASTM F 959, Type 325, compressible-washer type with plain finish.
- B. High-Strength Bolts, Nuts, and Washers: ASTM A 490, Type 1, heavy-hex steel structural bolts or tension-control, bolt-nut-washer assemblies with splined ends; ASTM A 563, Grade DH, heavy-hex carbon-steel nuts; and ASTM F 436, Type 1, hardened carbon-steel washers with plain finish.
 - 1. Direct-Tension Indicators: ASTM F 959, Type 490, compressible-washer type with plain finish.
- C. Zinc-Coated High-Strength Bolts, Nuts, and Washers: ASTM A 325, Type 1, heavy-hex steel structural bolts; ASTM A 563, Grade DH heavy-hex carbon-steel nuts; and ASTM F 436, Type 1, hardened carbon-steel washers.
 - 1. Finish: Hot-dip or mechanically deposited zinc coating.
 - 2. Direct-Tension Indicators: ASTM F 959, Type 325, compressible-washer type with mechanically deposited zinc coating finish.
- D. Tension-Control, High-Strength Bolt-Nut-Washer Assemblies: ASTM F 1852, Type 1, heavy-hex head assemblies consisting of steel structural bolts with splined ends, heavy-hex carbon-steel nuts, and hardened carbon-steel washers.
 - 1. Finish: Mechanically deposited zinc coating.
- E. Shear Connectors: ASTM A 108, Grades 1015 through 1020, headed-stud type, cold-finished carbon steel; AWS D1.1/D1.1M, Type B.
- F. Unheaded Anchor Rods: ASTM F 1554, Grade 36.

1. Configuration: Hooked.
2. Nuts: ASTM A 563 heavy-hex carbon steel.
3. Plate Washers: ASTM A 36/A 36M carbon steel.
4. Washers: ASTM F 436, Type 1, hardened carbon steel.
5. Finish: Mechanically deposited zinc coating, ASTM B 695, Class 50.

G. Headed Anchor Rods: ASTM F 1554, Grade 36, straight.

1. Nuts: ASTM A 563 heavy-hex carbon steel.
2. Plate Washers: ASTM A 36/A 36M carbon steel.
3. Washers: ASTM F 436, Type 1, hardened carbon steel.
4. Finish: Mechanically deposited zinc coating, ASTM B 695, Class 50.

H. Threaded Rods: ASTM A 36/A 36M.

1. Nuts: ASTM A 563 heavy-hex carbon steel.
2. Washers: ASTM F 436, Type 1, hardened carbon steel.
3. Finish: Mechanically deposited zinc coating, ASTM B 695, Class 50.

I. Clevises and Turnbuckles: Made from cold-finished carbon steel bars, ASTM A 108, Grade 1035.

J. Eye Bolts and Nuts: Made from cold-finished carbon steel bars, ASTM A 108, Grade 1030.

K. Sleeve Nuts: Made from cold-finished carbon steel bars, ASTM A 108, Grade 1018.

2.3 GROUT

- A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive and nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

2.4 FABRICATION

- A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and AISC 360.

1. Camber structural-steel members where indicated.
2. Fabricate beams with rolling camber up.
3. Identify high-strength structural steel according to ASTM A 6/A 6M and maintain markings until structural steel has been erected.
4. Mark and match-mark materials for field assembly.

- B. Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.

1. Plane thermally cut edges to be welded to comply with requirements in AWS D1.1/D1.1M.
- C. Bolt Holes: Cut, drill or punch standard bolt holes perpendicular to metal surfaces.
- D. Finishing: Accurately finish ends of columns and other members transmitting bearing loads.
- E. Cleaning: Clean and prepare steel surfaces that are to remain unpainted according to SSPC-SP 2, "Hand Tool Cleaning."
- F. Steel Wall-Opening Framing: Select true and straight members for fabricating steel wall-opening framing to be attached to structural steel. Straighten as required to provide uniform, square, and true members in completed wall framing.
- G. Holes: Provide holes required for securing other work to structural steel and for other work to pass through steel framing members.
 1. Cut, drill, or punch holes perpendicular to steel surfaces. Do not thermally cut bolt holes or enlarge holes by burning.
 2. Baseplate Holes: Cut, drill, mechanically thermal cut, or punch holes perpendicular to steel surfaces.
 3. Weld threaded nuts to framing and other specialty items indicated to receive other work.

2.5 SHOP CONNECTIONS

- A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 1. Joint Type: Snug tightened.
- B. Weld Connections: All welding shall be performed using the submerged arc process using E70XX Electrodes. Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
 1. Assemble and weld built-up sections by methods that will maintain true alignment of axes without exceeding tolerances in AISC 303 for mill material.

2.6 GALVANIZING

- A. Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to structural steel according to ASTM A 123/A 123M.

1. Fill vent and drain holes that will be exposed in the finished Work unless they will function as weep holes, by plugging with zinc solder and filing off smooth.
2. Galvanize lintels attached to structural-steel frame and located in exterior walls.

2.7 SOURCE QUALITY CONTROL

- A. Testing Agency: Owner will engage an independent testing and inspecting agency to perform shop tests and inspections and prepare test reports.
 1. Provide testing agency with access to places where structural-steel work is being fabricated or produced to perform tests and inspections.
- B. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.
- C. Bolted Connections: Shop-bolted connections will be inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- D. Welded Connections: In addition to visual inspection, shop-welded connections will be tested and inspected according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
 1. Liquid Penetrant Inspection: ASTM E 165.
 2. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
 3. Ultrasonic Inspection: ASTM E 164.
 4. Radiographic Inspection: ASTM E 94.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify, with steel Erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.
 1. Prepare a certified survey of bearing surfaces, anchor rods, bearing plates, and other embedments showing dimensions, locations, angles, and elevations.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated.
 - 1. Do not remove temporary shoring supporting composite deck construction until cast-in-place concrete has attained its design compressive strength.

3.3 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.
- B. Base Bearing and Leveling Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
 - 1. Set plates for structural members on wedges, shims, or setting nuts as required.
 - 2. Weld plate washers to top of baseplate.
 - 3. Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
 - 4. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.
- C. Maintain erection tolerances of structural steel within AISC's "Code of Standard Practice for Steel Buildings and Bridges."
- D. Align and adjust various members that form part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
 - 1. Level and plumb individual members of structure.
 - 2. Make allowances for difference between temperature at time of erection and mean temperature when structure is completed and in service.
- E. Splice members only where indicated. Where steel members are required to be spliced, the splice shall be designed to develop the full capacity of the section. Such splices shall not interfere with any architectural or mechanical clearances. Splice details and locations shall be shown on the shop drawings.
- F. Do not use thermal cutting during erection.

- G. Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.
- H. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1/D1.1M and manufacturer's written instructions.

3.4 FIELD CONNECTIONS

- A. High-Strength Bolts: Install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 - 1. Joint Type: Snug tightened.
- B. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
 - 1. Comply with AISC 303 and AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.
 - 2. Assemble and weld built-up sections by methods that will maintain true alignment of axes without exceeding tolerances in AISC's "Code of Standard Practice for Steel Buildings and Bridges" for mill material.

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to inspect field welds and high-strength bolted connections.
- B. Bolted Connections: Bolted connections will be inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- C. Welded Connections: Field welds will be visually inspected according to AWS D1.1/D1.1M.
 - 1. In addition to visual inspection, field welds will be tested and inspected according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
 - a. Liquid Penetrant Inspection: ASTM E 165.
 - b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
 - c. Ultrasonic Inspection: ASTM E 164.
 - d. Radiographic Inspection: ASTM E 94.

- D. In addition to visual inspection, test and inspect field-welded shear connectors according to requirements in AWS D1.1/D1.1M for stud welding and as follows:
 - 1. Perform bend tests if visual inspections reveal either a less-than-continuous 360-degree flash or welding repairs to any shear connector.
 - 2. Conduct tests on additional shear connectors if weld fracture occurs on shear connectors already tested, according to requirements in AWS D1.1/D1.1M.
- E. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.

3.6 REPAIRS AND PROTECTION

- A. Galvanized Surfaces: Clean areas where galvanizing is damaged or missing and repair galvanizing to comply with ASTM A 780.
- B. Touchup Painting: Immediately after erection, clean exposed areas where primer is damaged or missing and paint with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
 - 1. Clean and prepare surfaces by SSPC-SP 2 hand-tool cleaning or SSPC-SP 3 power-tool cleaning.
- C. Touchup Painting: Cleaning and touchup painting are specified in Division 9 painting Sections.

3.7 CONTROLLED INSPECTIONS – REQUIRED

- A. Pull Test and Shear Test of anchors 2 minutes.
- B. Structural Steel – Welding.
- C. Structural Steel – Erection and Bolting.

3.8 SHOP DRAWINGS – REQUIRED

- A. Structural Steel.

3.9 STRUCTURAL STEEL SPECIFICATIONS

- A. All structural steel work shall be fabricated and erected in accordance with the latest AISC Code of standard practice. Structural steel shall be new, clean and straight, and shall conform to the following requirements:
 - 1. Wide flange rolled shapes: ASTM A36 (FY=36 KSI).
 - 2. Plates, angles, bars, channels: ASTM A36, (FY=36 KSI).

3. Steel Pipe: ASTM A53, Type E or S, Prime Grade B (FY=35 KSI) or ASTM A501=36 KSI).
 4. Steel Tube: ASTM A500 (FY=46 KSI).
- B. All anchor bolts shall be ASTM A307 or ASTM A36.
 - C. Unless otherwise noted, all bolts shall be high strength bolts, in slip critical type connections conforming to ASTM A325 and shall be provided with hardened washers under the turned element (nut or bolt head).
 - D. Installation and tightening of all high strength bolts shall conform to the "Specification for Structural Joints using ASTM A325 Bolts or A490 Bolts," turn of the nut method.
 - E. Shop connections may be welded or high strength bolted. All connections shall conform to the typical connection details shown on the drawings.
 - F. All field connections shall be bolted with high strength bolts, unless otherwise shown.
 - G. All welding shall conform to the American Welding Society Structural Welding Code – Steel (AWS D1.1), and shall be done by A.W.S. Qualified Welders using E70XX Electrodes.
 - H. All contact surfaces within high strength bolted connections and welding areas shall be free of oil, paint, lacquer, or galvanizing.
 - I. All columns shall be milled to bear at baseplates and cap plates.
 - J. All tube and pipe columns shall have thru-plate connections.
 - K. Burning of holes, cuts, etc. in structural steel members in the field will not be permitted, except with the specific written approval of the engineer.
 - L. Hot dip galvanize steel hardware where noted shall conform to ASTM A153.
 - M. Hot dip galvanize steel products and assemblies where noted shall conform to ASTM A13.

END OF SECTION 05120

SECTION 26560 – EXTERIOR LIGHTING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section Includes:
 - 1. Exterior luminaires with lamps and ballasts. See also Appendix "A" specifications prepared by Michael Stiller Design and cut sheets embedded in electrical sheets E501 and E502.

1.03 DEFINITIONS

- A. CCT: Correlated color temperature.
- B. CRI: Color-rendering index.
- C. HID: High-intensity discharge.
- D. LER: Luminaire efficacy rating.
- E. Luminaire: Complete lighting fixture, including ballast housing if provided.

1.04 ACTION SUBMITTALS

- A. Product Data: For each luminaire and support component, arranged in order of lighting unit designation. Include data on features, accessories, finishes, and the following:
 - 1. Physical description of luminaire, including materials, dimensions, effective projected area, and verification of indicated parameters.
 - 2. Details of attaching luminaires and accessories.
 - 3. Details of installation and construction.
 - 4. Luminaire materials.
 - 5. Photometric data based on laboratory tests of each luminaire type, complete with indicated lamps, ballasts, and accessories.

- a. Testing Agency Certified Data: For indicated luminaires, photometric data shall be certified by a qualified independent testing agency. Photometric data for remaining luminaires shall be certified by manufacturer.
 - b. Manufacturer Certified Data: Photometric data shall be certified by manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products.
 - 6. Photoelectric relays.
 - 7. Ballasts, including energy-efficiency data.
 - 8. Lamps, including life, output, CCT, CRI, lumens, and energy-efficiency data.
 - 9. Means of attaching luminaires to supports, and indication that attachment is suitable for components involved.
 - B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
 - 1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 2. Wiring Diagrams: For power, signal, and control wiring.
 - C. Samples: For products designated for sample submission in the Exterior Lighting Device Schedule. Each Sample shall include lamps and ballasts.
- 1.05 INFORMATIONAL SUBMITTALS
- A. Warranty: Sample of special warranty.
- 1.06 CLOSEOUT SUBMITTALS
- A. Operation and Maintenance Data: For luminaires to include in emergency, operation, and maintenance manuals.
- 1.07 MAINTENANCE MATERIAL SUBMITTALS
- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Lamps: Minimum of One for every 100 of each type and rating installed. Furnish at least one of each type.
 - 2. Glass and Plastic Lenses, Covers, and Other Optical Parts: Minimum of One for every 100 of each type and rating installed. Furnish at least one of each type.

3. Ballasts: Minimum of One for every 100 of each type and rating installed. Furnish at least one of each type.

1.08 QUALITY ASSURANCE

- A. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by manufacturers' laboratories that are accredited under the National Volunteer Laboratory Accreditation Program for Energy Efficient Lighting Products.
- B. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by an independent agency, with the experience and capability to conduct the testing indicated, that is an NRTL as defined by OSHA in 29 CFR 1910.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- D. Comply with IEEE C2, "National Electrical Safety Code."
- E. Comply with NFPA 70.

1.09 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace products that fail in materials or workmanship; that corrode; or that fade, stain, perforate, erode, or chalk due to effects of weather or solar radiation within specified warranty period. Manufacturer may exclude lightning damage, hail damage, vandalism, abuse, or unauthorized repairs or alterations from special warranty coverage.
 1. Warranty Period for Luminaires: Five years from date of Substantial Completion.
 2. Warranty Period for Metal Corrosion: Five years from date of Substantial Completion.
 3. Warranty Period for Color Retention: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide products indicated as follows (per Appendix A) or approved equal. Electrical Contractor to confirm all catalog numbers and quantities prior to ordering.
 1. FT01-UPM : "B-K Lighting", PM2D-SM-H35E/H35E-MT

2. FT01-a: "B-K Lighting", EV-58-SAP-13-A-PM2D (Voltage by EC)
3. FT01-b: "B-K Lighting", EV-59-SAP-13-A-PM2D (Voltage by EC)
4. FT02: "B-K Lighting", B-AR-ES20-TR-276-MAC-13-A-8-xxx-WM
5. FT03: "B-K Lighting", YO-WW-81-SAP-13-11-CV-PC-H35M-xxx

2.02 GENERAL REQUIREMENTS FOR LUMINAIRES

- A. Luminaires shall comply with UL 1598 and be listed and labeled for installation in wet locations by an NRTL acceptable to authorities having jurisdiction.
 1. LER Tests Incandescent Fixtures: Where LER is specified, test according to NEMA LE 5A.
 2. LER Tests Fluorescent Fixtures: Where LER is specified, test according to NEMA LE 5 and NEMA LE 5A as applicable.
 3. LER Tests HID Fixtures: Where LER is specified, test according to NEMA LE 5B.
- B. Lateral Light Distribution Patterns: Comply with IESNA RP-8 for parameters of lateral light distribution patterns indicated for luminaires.
- C. Metal Parts: Free of burrs and sharp corners and edges.
- D. Sheet Metal Components: Corrosion-resistant aluminum unless otherwise indicated. Form and support to prevent warping and sagging.
- E. Housings: Rigidly formed, weather- and light-tight enclosures that will not warp, sag, or deform in use. Provide filter/breather for enclosed luminaires.
- F. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit re-lamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during re-lamping and when secured in operating position. Doors shall be removable for cleaning or replacing lenses. Designed to disconnect ballast when door opens.
- G. Exposed Hardware Material: Stainless steel.
- H. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
- I. Light Shields: Metal baffles, factory installed and field adjustable, arranged to block light distribution to indicated portion of normally illuminated area or field.
- J. Reflecting surfaces shall have minimum reflectance as follows unless otherwise indicated:

1. White Surfaces: 85 percent.
 2. Specular Surfaces: 83 percent.
 3. Diffusing Specular Surfaces: 75 percent.
- K. Lenses and Refractors Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.
- L. Luminaire Finish: Manufacturer's standard paint applied to factory-assembled and -tested luminaire before shipping. Where indicated, match finish process and color of pole or support materials.
- M. Factory-Applied Finish for Steel luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
1. Surface Preparation: Clean surfaces to comply with SSPC-SP 1, "Solvent Cleaning," to remove dirt, oil, grease, and other contaminants that could impair paint bond. Grind welds and polish surfaces to a smooth, even finish. Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning," or SSPC-SP 8, "Pickling."
 2. Exterior Surfaces: Manufacturer's standard finish consisting of one or more coats of primer and two finish coats of high-gloss, high-build polyurethane enamel.
 - a. Color: As selected by architect from manufacturer's standard catalog of colors.
- N. Factory-Applied Finish for Aluminum luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
 2. Natural Satin Finish: Provide fine, directional, medium satin polish (AA-M32); buff complying with AA-M20; and seal aluminum surfaces with clear, hard-coat wax.
 3. Class I, Clear Anodic Finish: AA-M32C22A41 (Mechanical Finish: medium satin; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, clear coating 0.018 mm or thicker) complying with AAMA 611.
 4. Class I, Color Anodic Finish: AA-M32C22A42/A44 (Mechanical Finish: medium satin; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.018 mm or thicker) complying with AAMA 611.
- O. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps and ballasts. Labels shall be located where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.

1. Label shall include the following lamp and ballast characteristics:
 - a. "USES ONLY" and include specific lamp type.
 - b. Lamp diameter code (T-4, T-5, T-8, T-12), tube configuration (twin, quad, triple), base type, and nominal wattage for fluorescent and compact fluorescent luminaires.
 - c. Lamp type, wattage, bulb type (ED17, BD56, etc.) and coating (clear or coated) for HID luminaires.
 - d. Start type (preheat, rapid start, instant start) for fluorescent and compact fluorescent luminaires.
 - e. ANSI ballast type (M98, M57, etc.) for HID luminaires.
 - f. CCT and CRI for all luminaires.

2.03 GENERAL REQUIREMENTS FOR SUPPORT COMPONENTS

- A. Luminaire Attachment Provisions: Comply with luminaire manufacturers' mounting requirements. Use stainless-steel fasteners and mounting bolts unless otherwise indicated.
- B. Mountings, Fasteners, and Appurtenances: Corrosion-resistant items compatible with support components.
 1. Materials: Shall not cause galvanic action at contact points.
 2. Anchor Bolts, Leveling Nuts, Bolt Caps, and Washers: Hot-dip galvanized after fabrication unless otherwise indicated.
 3. Anchor-Bolt Template: Plywood or steel.
- C. Handhole: Oval-shaped, with minimum clear opening of 2-1/2 by 5 inches (65 by 130 mm), with cover secured by stainless-steel captive screws.

PART 3 - EXECUTION

3.01 LUMINAIRE INSTALLATION

- A. Install lamps in each luminaire.
- B. Fasten luminaire to indicated structural supports.
 1. Use fastening methods and materials selected to resist seismic forces defined for the application and approved by manufacturer.
- C. Adjust luminaires that require field adjustment or aiming. Include adjustment of photoelectric device to prevent false operation of relay by artificial light sources, favoring a north orientation.

3.02 CORROSION PREVENTION

- A. Aluminum: Do not use in contact with earth or concrete. When in direct contact with a dissimilar metal, protect aluminum by insulating fittings or treatment.
- B. Steel Conduits: Comply with Section 260533 "Raceways and Boxes for Electrical Systems." In concrete foundations, wrap conduit with 0.010-inch- (0.254-mm-) thick, pipe-wrapping plastic tape applied with a 50 percent overlap.

3.03 GROUNDING

- A. Ground metal poles and support structures according to Section 260526 "Grounding and Bonding for Electrical Systems."
 - 1. Install grounding electrode for each pole unless otherwise indicated.
 - 2. Install grounding conductor pigtail in the base for connecting luminaire to grounding system.
- B. Ground nonmetallic poles and support structures according to Section 260526 "Grounding and Bonding for Electrical Systems."
 - 1. Install grounding electrode for each steel post.
 - 2. Install grounding conductor and conductor protector.
 - 3. Ground metallic components of pole accessories and foundations.

3.04 FIELD QUALITY CONTROL

- A. Inspect each installed fixture for damage. Replace damaged fixtures and components.
- B. Illumination Observations: Verify normal operation of lighting units after installing luminaires and energizing circuits with normal power source.
 - 1. Verify operation of photoelectric controls.

END OF SECTION 26560

SECTION 32311 – DECORATIVE METAL FENCES AND GATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Custom steel fences.
 - 2. Swing gates.
 - 3. Horizontal-slide gates.
- B. Related Requirements:
 - 1. Section 03300 "Cast-in-Place Concrete" for concrete and post concrete fill.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Kingston Water Treatment Plant, East Strand Street, Kingston NY.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For gates. Include plans, elevations, sections, details, and attachments to other work.
- C. Samples: For each fence material and for each color specified.
 - 1. Provide Samples 12 inches (300 mm) in length for linear materials.
 - 2. Provide Samples 12 inches (300 mm) square for metal meshes and metal bar grates.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Fabricator of products.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Lightning-Protection System: Maximum grounding-resistance value of 25 ohms under normal dry conditions.

2.2 STEEL FENCES

- A. Posts: Square steel tubing. All steel shapes and connections shall be galvanized.
 - 1. Line Posts: As per drawings. Minimum 2 by 2 inches (51 by 51 mm) with minimum 1/8-inch (3.2-mm) wall thickness.
 - 2. End and Corner Posts: As per drawings. Minimum 2 by 2 inches (51 by 51 mm) with minimum 1/8-inch (3.2-mm) wall thickness.
 - 3. Swing Gate Posts: As per drawings. Minimum 3 by 3 inches (76 by 76 mm) with minimum 3/16-inch (4.76-mm) wall thickness.
 - 4. Horizontal-Slide Gate Post, Openings Wider Than 12 Feet (3.7 m): As per drawings. Minimum 4 by 4 inches (102 by 102 mm) with minimum 3/16-inch (4.76-mm) wall thickness.
 - 5. Guide Posts for Class 1 Horizontal-Slide Gates: As per drawings. Minimum 3 by 3 inches (76 by 76 mm) minimum 3/16-inch (4.76-mm) wall thickness; installed adjacent to gate post to permit gate to slide in space between.
- B. Post Caps: Formed from steel sheet and hot-dip galvanized after forming.
- C. Rails:
 - 1. Steel Tube Rails: As per drawings.
 - 2. Steel Channel Rails: As per drawings.
- D. Infill: Custom design as indicated on Drawings.
 - 1. Angles: 2"x2" steel angles welded at corners to create frame for perimeter of metal mesh.
 - 2. Woven Mesh fabric: Match screens as per section 10240 – screen Type "B".
- E. Fasteners: Stainless-steel carriage bolts and tamperproof nuts.
- F. Fabrication: Assemble fences into sections by welding metal mesh to welded galvanized steel frames.
 - 1. Fabricate sections with galvanized steel frames that are pre-drilled for field fastening to clips welded to posts.
 - 2. Drill posts and clips for fasteners before finishing to maximum extent possible.

- G. Finish exposed welds to comply with NOMMA Guideline 1, partially dressed weld with splatter removed
- H. Galvanizing: For items other than hardware that are indicated to be galvanized, hot-dip galvanize to comply with ASTM A 123/A 123M. For hardware items, hot-dip galvanize to comply with ASTM A 153/A 153M.
 - 1. Hot-dip galvanize posts and clips.
 - 2. Hot-dip galvanize custom-design frame and infill assemblies after fabrication.
- I. Fasteners: Standard tamperproof, corrosion-resistant, stainless steel fasteners matching fence components with resilient polymer washers.
- J. Fabrication: Assemble fences into sections by welding infill mesh to rails panel frames.
 - 1. Fabricate sections with clips welded to posts.
 - 2. Drill clips for fasteners before finishing.
- K. Finish exposed welds to comply with NOMMA Guideline 1, partially dressed weld with splatter removed
- L. Finish: Galvanized steel.

2.3 SWING GATES

- A. Gate Configuration: Single leaf.
- B. Gate Frame Height: As indicated on drawings.
- C. Gate Opening Width: As indicated on drawings.
- D. Galvanized-Steel Frames and Bracing: Fabricate members from standard shapes as per drawings and hot-dip galvanized after fabrication.
- E. Infill: Comply with requirements for adjacent fence.
- F. Hardware: Provide specifications for architects review and approval for hardware as required for the operation of gates as indicated on the drawings. Consult with owner regarding locking requirements for gates.
- G. Finish exposed welds to comply with NOMMA Guideline 1, partially dressed weld with splatter removed.
- H. Galvanizing: For items other than hardware that are indicated to be galvanized, hot-dip galvanize to comply with ASTM A 123/A 123M. For hardware items, hot-dip galvanize to comply with ASTM A 153/A 153M.

2.4 HORIZONTAL-SLIDE GATES

- A. Gate Configuration: Single leaf.
 - 1. Type: Cantilever slide, with roller assemblies.
- B. Gate Frame Height: As indicated on drawings.
- C. Gate Opening Width: As indicated on drawings.
- D. Galvanized-Steel Frames and Bracing: Fabricate members from standard shapes as indicated on drawings.
- E. Steel Frames and Bracing: Fabricate members from standard shapes as per drawings
Hot-dip galvanize frames after fabrication.
- F. Infill: Comply with requirements for adjacent fence.
- G. Hardware: Latches permitting operation from both sides of gate, locking devices, hangers, roller assemblies and stops fabricated from galvanized steel. Fabricate latches with integral eye openings for padlocking; padlock accessible from both sides of gate. Consult with owner regarding locking requirements.
- H. Finish exposed welds to comply with NOMMA Guideline 1, Finish #3 - partially dressed weld with splatter removed.
- I. Galvanizing: For items other than hardware that are indicated to be galvanized, hot-dip galvanize to comply with ASTM A 123/A 123M. For hardware items, hot-dip galvanize to comply with ASTM A 153/A 153M.
- J. Steel Finish: Galvanized.

2.5 STEEL AND IRON

- A. Plates, Shapes, and Bars: ASTM A 36/A 36M.
- B. Tubing: ASTM A 500/A 500M, cold-formed steel tubing.

2.6 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
 - 1. For aluminum, provide type and alloy as recommended by producer of metal to be welded and as required for strength and compatibility in fabricated items.
- B. Concrete: Refer to Section 03300

- C. Nonshrink Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107/C 1107M and specifically recommended by manufacturer for exterior applications.

2.7 GROUNDING MATERIALS

- A. Grounding Conductors: Bare, solid wire for No. 6 AWG and smaller; stranded wire for No. 4 AWG and larger.
 - 1. Material above Finished Grade: Copper.
 - 2. Material on or below Finished Grade: Copper.
 - 3. Bonding Jumpers: Braided copper tape, 1 inch (25 mm) wide, woven of No. 30 AWG bare copper wire, terminated with copper ferrules.
- B. Grounding Connectors and Grounding Rods: Comply with UL 467.
 - 1. Connectors for Below-Grade Use: Exothermic-welded type.
 - 2. Grounding Rods: Copper-clad steel.
 - a. Size: 5/8 by 96 inches (16 by 2440 mm).

2.8 METALLIC-COATED-STEEL FINISHES

- A. Galvanized Finish: Clean welds, mechanical connections, and abraded areas, and repair galvanizing to comply with ASTM A 780/A 780M.
- B. Surface Preparation: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants. After cleaning, apply a coating suited to the organic coating to be applied over it. Clean welds, mechanical connections, and abraded areas, and repair galvanizing to comply with ASTM A 780/A 780M.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, construction layout, and other conditions affecting performance of the Work.
- B. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet (152.5 m) or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.
 - 1. Construction layout and field engineering are specified in Section 01050 "Engineering."

3.3 FENCE INSTALLATION

- A. Install fences according to manufacturer's written instructions.
- B. Install fences by setting posts as indicated and fastening infill panels to posts.
- C. Post Excavation: Drill or hand-excavate holes for posts in firm, undisturbed soil. Excavate holes to a diameter of not less than 4 times post size and a depth of not less than 24 inches (600 mm) plus 3 inches (75 mm) for each foot (300 mm) or fraction of a foot (300 mm) that fence height exceeds 4 feet (1.2 m).
- D. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.
 - 1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
 - 2. Concrete Fill: Place concrete around posts and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
 - a. Exposed Concrete: Extend 2 inches (51 mm) above grade. Finish and slope top surface to drain water away from post.
 - b. Concealed Concrete: Top 2 inches (51 mm) below grade to allow covering with surface material. Slope top surface of concrete to drain water away from post.
 - 3. Posts Set in Concrete: Extend post to within 6 inches (150 mm) of specified excavation depth, but not closer than 3 inches (75 mm) to bottom of concrete.
 - 4. Posts Set into Concrete in Sleeves: Use galvanized-steel pipe sleeves with inside diameter at least 3/4 inch (20 mm) larger than outside diagonal dimension of post, preset and anchored into concrete for installing posts.
 - a. Extend posts at least 5 inches (125 mm) into sleeve.
 - b. After posts have been inserted into sleeves, fill annular space between post and sleeve with nonshrink grout, mixed and placed to comply with grout manufacturer's written instructions; shape and smooth to shed water. Finish and slope top surface of grout to drain water away from post.
 - 5. Posts Set into Voids in Concrete: Form or core drill holes not less than 3/4 inch (20 mm) larger than outside diagonal dimension of post.

- a. Extend posts at least 5 inches (125 mm) into concrete.
- b. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink grout, mixed and placed to comply with grout manufacturer's written instructions. Finish and slope top surface of grout to drain water away from post.

3.4 GATE INSTALLATION

- A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.5 GROUNDING AND BONDING

- A. Fence Grounding: Install at maximum intervals of 750 feet (225 m).
 - a. Gates and Other Fence Openings: Ground fence on each side of opening.
 - 1) Bond metal gates to gate posts.
 - 2) Bond across openings, with and without gates, except at openings indicated as intentional fence discontinuities. Use No. 2 AWG wire and bury it at least 18 inches (460 mm) below finished grade.
- B. Protection at Crossings of Overhead Electrical Power Lines: Ground fence at location of crossing and at a maximum distance of 150 feet (45 m) on each side of crossing.
- C. Fences Enclosing Electrical Power Distribution Equipment: Ground as required by IEEE C2 unless otherwise indicated.
- D. Grounding Method: At each grounding location, drive a grounding rod vertically until the top is 6 inches (150 mm) below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence component at grounding location.
- E. Bonding Method for Gates: Connect bonding jumper between gate post and gate frame.
- F. Connections: Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact are galvanically compatible.
 - 1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
 - 2. Make connections with clean, bare metal at points of contact.
 - 3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.

4. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
 5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.
- G. Bonding to Lightning-Protection System: If fence terminates at lightning-protected building or structure, ground the fence and bond the fence grounding conductor to lightning-protection down conductor or lightning-protection grounding conductor, complying with NFPA 780.

3.6 ADJUSTING

- A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
- B. Lubricate hardware and other moving parts.

END OF SECTION 32311

SECTION 32350 – SCREENING DEVICES

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes: Screen panels and accessories.
- B. Related Sections:
 - 1. Section 03 30 00: Cast-in-Place Concrete: For setting fence posts.
 - 2. Section 32 93 00: Plants.

1.02 REFERENCES:

- A. ASTM A500 – Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- B. ASTM A82 – Mechanical, Physical and Performance Properties of Carbon Steel Wire
- C. ASTM A641 – Zinc-Coated (Galvanized) Carbon Steel Wire
- D. ASTM A879 – Steel Sheet, Zinc Coated by the Electrolytic Process for Applications Requiring Designation of the Coating Mass on Each Surface.
- E. ASTM B117 – Operating Salt Spray (Fog) Apparatus.
- F. RAL – German Institute for Quality Assurance and Indication.

1.03 SUBMITTALS

- A. Submittals shall be in accordance with Section 01 33 00. Provide two sets of submittals.
- B. Product Data: Submit manufacturer's product data, standard details, and installation instructions.
- C. Shop Drawings: Submit showing sizes critical dimensions, panel layout constraints using a 2 x 2 inch modular grid, and details and locations of accessories.

1.04 QUALITY ASSURANCE

- A. Manufacturer: Minimum 5 years experience manufacturing and supplying trellis structures of the type required for this project.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect materials from damage. Store panels flat. Provide edge protection when strapping is used. Do not apply loads to panel edges.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

- A. GREENscreen®, Los Angeles, CA; phone 800-450-3494, fax 310-837-0523, www.greenscreen.com.

2.02 PANELS

- A. Panels shall be rigid, three-dimensional welded wire grid fabricated of 14-gage ASTM A641 galvanized steel wire.
- B. Face Grid: Wires shall be welded at each intersection to form a 2 x 2 inch face grid on the front and back of panels,
- C. Trusses: Face grids shall be separated by bent wire trusses spaced at 2-inch centers and welded to front and back face grids at each truss apex.
- D. Thickness: 3 inches.
- E. Length and Width: Provide in 2-inch nominal increments.
- F. Tolerance: 1/8 inch in width and 1/4 inch in length.

2.03 ACCESSORIES

- A. Trim:
 - 1. Fabricate from 20-gage ASTM A879 galvanized steel.
 - 2. Types:
 - a. Channel Trim: Thickness of panel x 1/2 inch legs.
 - b. Angle Trim: 1/2 inch x 1/2 inch legs.
 - 3. Locations:
 - a. Corners formed by intersections of panels: Angle type.
 - b. Top of Treillage: Channel type.
 - c. Side of Treillage : Channel type.
 - d. Bottom of Treillage : Angle type.
- B. Clips and Straps: Provide manufacturer's standard types of clips and straps suitable for mounting conditions. Fabricate from ASTM A879 galvanized steel. Adjustable clips shall have 1/4 inch diameter 18-8 stainless steel bolt, washer, and nut.
- D. Fence Posts: As per structural drawings and specifications.

- E. Fasteners for Mounting Clips to Fence Posts: Self drilling, self tapping hex washer head screws, Type 410 stainless steel, and free from rust when salt spray tested for 300 hours in accordance with ASTM B117.
- F. Fasteners for Attachment to Structure:
 - 1. To Structural Steel: Minimum resistance of 550 lbs pull out.

2.04 FABRICATION

- A. Cut to size.
- B. Weld trim to panels and grind smooth exterior surfaces of welds.

2.05 FINISHES

- A. Metal components (except fasteners) shall be factory finished after fabrication.
- B. Finish System: pre-treat with general purpose, alkaline, water based cleaner / degreaser applied at 240 degrees F. prime with zinc-rich epoxy powder coat. Topcoat with polyester or polyester-urethane powder coat.
- C. Salt Spray Resistance: Finish shall remain rust free when tested 1680 hours in accordance with ASTM B117.
- D. Color: Gloss or Wrinkle-Textured Green. Submit three (3) samples of each finish for approval by Architect.
- E. Touch-Up Paint: Provide high quality, exterior-grade spray paint suitable for conditions of use.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspect substrates and conditions affecting work of Section. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Fence Posts: Install posts as shown on architectural and structural Drawings.

3.03 INSTALLATION

- A. Install panels plumb and square, centered within area designated for panels, and aligned to maintain modular grid.
- B. Avoid cutting panels in field. Where field cutting is essential, apply touch-up paint to cut edges.
- C. Install securely with fasteners to meet manufacturer's requirements.

- D. Repair bent or damaged panels. If panels cannot be repaired to satisfaction of Architect, remove from jobsite and replace with new panels.

END OF SECTION 32350

SECTION 10240 – ORNAMENTAL FABRIC GRILLES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Woven wire fabrics, mounting systems and support framing as indicated.

1.2 RELATED SECTIONS

- A. Section 05500 - Metal Fabrications: Supporting structure.

1.3 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Material Certification: Provide material certification (Certs) for each alloy scheduled or required.
- D. Verification Samples: For each finish product specified, two samples, minimum size 5 by 7 inches (125 by 175 mm), representing actual product, color, and patterns.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years manufacturing similar products.
- B. Installer Qualifications: Minimum 2 years experience installing similar products.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.5 DEFINITIONS

- A. Apparent Percent Opening (APO): "Gage Architectural Metals" has developed optical testing procedures and can provide performance curves for all of their products. They refer to this enhanced version of Percent Open Area as Apparent Percent Open (APO).
- B. Area Moment of Inertia: A property of a shape that is used to predict its resistance to bending and deflection.

- C. Aspect Ratio (AR): Aspect ratio is the ratio of the larger pattern repeat distance to the smaller pattern repeat distance.
- D. Asymmetric: For our purposes, any fabric that is woven with a flat top crimp style wire will have two surfaces with different textures - a front and a back, or a top and bottom.
- E. Crimp: The manner in which the wire is formed. See Crimp Styles.
- F. Gauge: A numerical integer method of designating wire diameters. Many different gauges exist. To avoid confusion, use decimals of an inch or mm to designate wire diameter.
- G. Mesh to Diameter Ratio (MD): Mesh to diameter ratio MD is the mesh spacing (center to center) divided by the wire diameter.
- H. Mesh Spacing, Mesh Count: Generally refers to the repeat pattern of the woven material.
- I. Metallurgy: The general science of metals.
- J. Mill Certs: Material certification documents. See Metallurgy.
- K. Modulus of Elasticity: An elastic modulus, or modulus of elasticity, is the mathematical description of an object or substance's tendency to be deformed when a force is applied to it. For our purposes, when a light force is applied to a piece of wire, of same diameter and length, it will deflect differing amounts depending on material. Aluminum and copper based alloys will deflect approximately three times the amount of steel based alloys. Modulus is different from strength.
- L. Opacity: The degree to which a particular mesh is opaque.
- M. Patina: A chemical compound formed on the surface of metal.
- N. Percent Open Area: Percent open area is the ratio of hole area to total screen area at a 90° angle of incidence to the plane of the material, expressed as a percentage.
- O. Scale: For our purposes, the ability to create larger or smaller weaves without changing any proportions or crimp styles.
- P. Shute (or Fill Wires): Wires that lie perpendicular to the direction in which the fabric is being woven.
- Q. Stiffness: Resistance to deflection by an applied force. How firm, or, conversely, how springy does an object feel.
- R. Strength: For our purposes, how much load will a piece of wire withstand before:
 - 1. Permanent bending (yield strength).
 - 2. Breaking (tensile strength).
- S. Striation: A thin line or band, especially one or several that are close together.

- T. Warp Wires: The wires that lie parallel to the direction in which the fabric is being woven.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: The Gage Corporation, Int.; 803 S. Black River St.; Sparta, WI 54656; Toll Free Tel: 800-786-4243; Tel: 608-269-7447; Email: gage@centurytel.net; Web: www.gagecorp.net
- B. Substitutions: Not permitted without written approval from the Architect.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 MESH

- A. Product Name: Gage GW IF 950 "Trellis"
 - 1. Percent Open: 83%
 - 2. Weight (lbs/sq ft): 0.85 lbs / Sq. Ft.
- B. Product Name: Gage GW 955 Corsican II
 - 1. Percent Open:
 - 2. Weight (lbs/sq ft): 1.33 lbs / sq. ft.

2.3 MOUNTING SYSTEMS

- A. Perimeter System:
 - 1 Angle Iron: Mesh welded to inside leg of angle. Sizes as indicated on drawings.
 - a. Materials and Finish:
 - 1) Satin stainless steel

2.4 MESH MATERIALS

- A. Stainless Steel:

1. 300 Series Stainless Steels:
 - a. T304 Stainless
 - b. T316 Stainless

2.5 MESH FINISHES

- A. Mechanical Finish

2.6 MESH FABRICATION

- A. Crimp Styles:

2. Plain Crimp - PL:

- a. Plain Crimp is a simple zigzag style of crimping with an intersection of two wires at every available pocket. When MD ratios are under 4:1, this style of crimping is usually the only practical style. Plain Crimp styles are most effective at MD ratios of 5:1 or less.

3. Flat Top Crimp - FT:

- a. Flat top is really a modified version of Lock Crimp, except that all the crimping is offset to one side of the material. The result is that the top surface of Flat Top presents a smooth surface with all the wire surfaces in a single plane. The bottom side has crimp bumps approximately twice the height of Lock Crimp bumps. Originally developed to present a smooth surface to material flow, or as a backer screen for finer mesh, Flat Top is also used extensively in architectural applications.

4. Lock Crimp - LC:

- a. Lock Crimp is a more modern and very versatile crimp style that has been largely overlooked for architectural applications. Unlike Plain Crimp, Lock Crimp is characterized by straight sections of wire connected by a well defined 'bump' at the wire intersections. Lock Crimp yields material with superb dimensional stability and has a clean look that many designers find visually appealing. Lock Crimp works well at practically any MD ratios of 4:1 and greater.

5. Triple Shoot Crimp - TS:

- a. Triple Shoot is a specialty crimp style that is generally always used in conjunction with another crimp style. It consists of relatively long sections of straight wire connected by groupings of three Plain Crimp pockets. The resulting material has rectangular openings of very high aspect ratio. Developed originally as a non-blinding sizing product, it also has interesting architectural properties.

6. Intercrimp - I3, I5, I7 etc.:

- a. While not really a fundamental crimp style, because of its widespread use, we choose to list it with other fundamental styles. Intercrimp is simply Plain Crimp except that wire intersections occur only at every 3rd, 5th, 7th, etc intersection. This type of weave is practical only at MD ratios of 6 or more, and is best suited for ratios of 8:1 or more. We

designate this style of weave as 13, 15, 17 etc. Intercrip was the first weave style that was produced in the late 19th century.

7. Faux Cable - PS:
 - a. Faux Cable is a variant of the triple shoot crimp style, but instead of having the clusters of three closely space wires separated by a small space, Faux Cable has its clusters of wire (generally 2, 3 or 4) spaced tightly together with no gaps between adjacent wires. While some manufacturers produce this style of material by simply pressing groups of wires together, Gage places special crimps in the surface of the wire. This technique assures absolute repeatability in the mesh spacing and eliminates any problems associated with cumulative pitch variation. Cumulative pitch variation can result in aesthetic problems when attempting to align multiple panels. Our designation for this crimp style is PS.
8. Hybrid Crimp Styles:
 - a. Intercrip / Plain.
 - b. Lock Crimp / Plain.
 - c. Flat Top / Plain.
 - d. Triple Shoot / Plain.
 - e. Triple Shoot / Lock Crimp.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrate (structural frame) has been properly prepared.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

3.4 PROTECTION

- B. Protect installed products until completion of project.
- C. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION 10240

SECTION 133123 - TENSIONED FABRIC STRUCTURES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 DEFINITIONS

- A. Tensioned Fabric Structure: Cable and/or frame supported tensioned membrane-covered fabric structure; incorporating a fabric with low elongation characteristics under tension and capable of an anticlassic configuration. Fabric structures in which fabric is applied as flat or mono-axially curved configurations are not acceptable.

1.03 SUMMARY

A. Section Includes:

1. Section includes a tensioned fabric canopy system as shown on Drawings and specified in this Section.
2. Architect's drawings indicate design intent with respect to sizes, shapes, and configurations of the tensioned fabric canopy. Provide all components and accessories required for complete tensioned fabric canopy system, whether or not specifically shown or specified.
3. The tensioned fabric structure will assume bolted/pinned connections for field assembly. No field welding will be permitted.

- B. The tensioned fabric structure Subcontractor shall be responsible for the structural design, detailing, fabrication, supply, and installation of the Work specified herein. The intent of this specification is to establish in the first instance an undivided, single-source responsibility of the Subcontractor for all of the foregoing functions.

- C. Subcontractor's Work shall include the structural design, supply, fabrication, shipment, and erection of the following items:

1. The architectural membrane as indicated on the drawings and in these specifications.
2. Cables and fittings.
3. Perimeter, catenary, and sectionalized aluminum clamping system.
4. Structural steel, including masts, trusses, struts, and beams as indicated on the drawings.
5. Fasteners and gaskets.

D. Related Requirements:

1. Division 05 Sections "Structural Steel Framing" and "Architecturally Exposed Structural Steel" for steel structure supporting tensioned fabric structure.
2. Select locally or regionally fabricated products wherever possible. Steel shall be sourced from the United States.

1.04 REFERENCES

A. General: Except as otherwise shown or noted, all work shall comply with the requirements of the following codes and standards:

1. American Institute of Steel Construction (AISC).
 - a. Specifications for the Design, Fabrication, and Erection of Structural Steel for Buildings.
 - b. Code of Standard Practice for Steel Buildings and Bridges.
 - c. Specification for Structural Steel Buildings – Allowable Stress Design and Plastic Design.
 - d. Specification for Allowable Stress Design of Single-angle Members.
 - e. Seismic Provisions for Structural Steel Buildings.
2. American Society of Civil Engineers.
 - a. ASCE 19: Structural Applications of Steel Cables for Buildings.
3. American Society of Testing and Materials (ASTM).
 - a. ASTM A586: Standard Specifications for Zinc-Coated Steel Structural Strand.
 - b. ASTM A603: Standard Specifications for Zinc-Coated Steel Structural Wire Rope.
 - c. ASTM D4851-88: Standard Test Methods for Coated and Laminated Fabrics for Architectural Use.
 - d. ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials.
 - e. ASTM E108: Standard Test Methods for Fire Test and Roof Coverings.
 - f. ASTM E136: Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degrees C.
 - g. ASTM C423: Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
 - h. ASTM E424: Standard Test Method for Solar Energy Transmittance and Reflectance of Sheet Materials.
4. American Welding Society (AWS).

- a. AWS D1.1: Structural Welding Code.
- b. AWS 2.4: Symbols for Welding and Nondestructive Testing.

5. Aluminum Association

- a. Specifications for Aluminum Structures.

6. National Fire Protection Association (NFPA).

- a. NFPA 701: Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.

7. Steel Structures Painting Council (SSPC).

- a. Steel Structures Painting Manual, Volumes 1 and 2.

1.05 SYSTEM REQUIREMENTS

- A. General: Provide a tensioned fabric structure system that complies with requirements specified herein by testing the Subcontractor's corresponding membrane system in accordance with the indicated test methods.
- B. Building Code Criteria: The tensioned fabric structure shall comply with the International Building Code, 2009 edition.
- C. Comply with local building codes and respective loading criteria for Snow Loads, Live Loads, Dead Loads, Wind Speed, and Seismic Loads.
- D. Life Safety: Tensioned fabric structure shall be detailed so that no life safety issue is created in the event of a loss of a part of the membrane. The tensioned fabric structure shall not rely on the membrane for structural stability.

1.06 ACTION SUBMITTALS

A. Product Data: For each type of product.

- 1. Include styles, material descriptions, construction details, fabrication details, dimensions of individual components and profiles, hardware, fittings, mounting accessories, features, and finishes for tensioned fabric structures.
- 2. Include rated capacities, light transmissions, and operating characteristics of furnished specialties and accessories.

B. Design Drawings:

- 1. Include plans, elevations, sections, mounting heights, and frame assembly details.
- 2. Preliminary member sizes with wall thickness TBD.

3. Show intended fabric attachment hardware and details.
4. Identify direction, details and locations of fabric seams.
5. Show details of fabric membrane dimensions including length of spans, sag in curvature and actual shaded area.

C. Engineered Drawings (submit after Design Drawings have been approved):

1. Calculations with Wet Stamp seal of a Professional Engineer with a license in the same state as the project location.
2. Engineering Drawings with Wet Stamp seal of a Professional Engineer with a license in the same state as the project location.
3. Include plans, elevations, sections, mounting heights, and frame assembly details.
4. Provide frame member sizes and required wall thicknesses.
5. Identify all welding requirements.
6. Detail all bolted and/or pin connections for frame assembly.
7. Identify required sizes of bolts, pins, plates and tubing.
8. Verify the fabric meets minimum engineering requirements.
9. Detail fabric attachment methods and identify thickness of all membrane plates, clamps and other attachment components.
10. Call out all cable sizes and pretension requirements.
11. Submit anchor-bolt plans before foundation work begins. Include location, diameter, and projection of anchor bolts required to attach the tensioned fabric structures to foundation. Indicate column reactions at each location.

D. Samples for Initial Selection: Electronic file of available frame finish colors.

E. Samples for Verification: For the following:

1. Fabric: Qty. (4) 8 ½" x 11" samples of fabric as selected by the architect.
2. Frame Finish: Qty. (4) Sample chips, not less than 2" x 3" in size.

F. Provide a Schedule of Values within (2) weeks of project award.

1.07 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer, fabricator and professional engineer.
- B. Welding certificates.
- C. Sample Warranty: For fabric warranty.

1.08 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For tensioned fabric structures to include in operation and maintenance manuals.

1. Include the following:

- a. Methods for maintaining tensioned fabric structure fabrics and finishes.
- b. Precautions about cleaning materials and methods that could be detrimental to fabrics, finishes, and performance.

1.09 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate tensioned fabric structures similar to those required for this Project and whose products have a record of successful in-service performance.

1. Fabricator is a Master Fabric Craftsman certified by the Industrial Fabrics Association International.
2. Fabricator's responsibilities include fabricating and installing tensioned fabric structures and providing professional engineering services needed to assume engineering responsibility.
3. Fabricator's engineering services must utilize Finite Element Analysis software that performs fabric form finding and takes into account fabric material properties and pre-stress characteristics.
4. Fabricator must have proven record of at least (5) successful projects of similar size and similar specified fabric material.
5. Fabricator must have been in continuous operation as a professional tensioned fabric structure manufacturer for minimum of (10) years prior to contract.
6. Fabricator must have an in-house Made-in-America manufacturing facility for both frame and fabric membrane components.

B. Installer Qualifications: Fabricator of products.

C. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."

1.10 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit installation of tensioned fabric structure in exterior locations to be performed according to manufacturers' written instructions and warranty requirements.

B. Field Measurements: Where tensioned fabric structure installation is indicated to fit to other work, verify dimensions of other work by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for fenestration operation throughout the entire operating range. Notify Architect of discrepancies. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.11 WARRANTY

A. Special Warranty: Manufacturer and fabricator agree to repair or replace components of tensioned fabric structures that fail in materials or workmanship within specified warranty period of one year from the date of Substantial Completion.

1. Failures include, but are not limited to, the following:

- a. Structural failures including framework.
- b. Deterioration of fabric including seam failure.
- c. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

2. Warranty Period, Fabric: Reference the manufacturer's limited warranty for the specified fabric manufacturer and product.

3. Warranty Period, Cables, Securement Devices and Accessories: One year from date of Substantial Completion

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Basis-of-Design: Subject to compliance with requirements, provide the tensioned fabric structures designed, engineered, fabricated and installed by the following:

1. Eide Industries, Inc.

- a. Address: 16215 Piuma Avenue, Cerritos, California USA 90703
- b. Contact: Erik Jarvie, Sales Engineer. Phone: (562) 402-8335 ext.125;
Email: erik@eideindustries.com; Website: www.tensionstructures.com

2. Or approved equal. Manufacturer must meet all minimum requirements as outlined in Item 1.07 - Quality Assurance of this section and show written proof for each item listed to become an approved equal.

3. Substitution requests must be submitted by a Prime Bidder, minimum of (10) days prior to bid date. Any approved equals shall be issued by addendum only, prior to the bid date.

B. Source Limitations: Obtain tensioned fabric structures from single source from single manufacturer.

2.02 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Provide tensioned fabric canopy system complying with requirements and limitations of authorities having jurisdiction that are within Contractor's control.
- B. Delegated Design: Engage a qualified professional engineer to design tensioned fabric canopy system. Delegated design engineering requirements include, but are not limited to, the following:
1. Prepare structural design drawings defining the precise interface geometry determination, reaction loads imposed on structural steel framing, anchoring loads, connection details, interfaces and seam layouts.
 2. Structural calculations for the tensioned fabric canopy system shall include:
 - a. Large deflection numerical shape generation that will insure a stable, uniformly stressed, three dimensionally curved shape that is in static equilibrium with the internal pre-stress forces and is suitable to resist all applied loads.
 - b. Large deflection finite element method structural analysis of the membrane system under all applicable wind and seismic loads.
 - c. Connection design including bolt, weld and ancillary member sizing.
 - d. Biaxial fabric test specification, interpretation and fabric compensation determination.
 - e. Accurate generation of the two dimensional compensated fabric templates required to generate the three dimensional equilibrium shape.
- C. In engineering tensioned fabric canopy system fittings and accessories to withstand structural loads indicated, determine allowable design working stresses of railing materials based on the following:
1. Steel: 72 percent of minimum yield strength.
 2. Stainless Steel: 60 percent of minimum yield strength.
 3. Aluminum: The lesser of minimum yield strength divided by 1.65 or minimum ultimate tensile strength divided by 1.95.
- D. Structural Performance: Tensioned fabric canopy system shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to ASCE/SEI 7:
1. Wind Loads: To be determined by Subcontractor's Engineer of Record.
 2. Live Loads: To be determined by Subcontractor's Engineer of Record.
 3. Snow Loads: To be determined by Subcontractor's Engineer of Record.
 4. Seismic Loads: To be determined by Subcontractor's Engineer of Record.
- E. General: In engineering railings to withstand structural loads indicated, determine allowable design working stresses of railing materials based on the following:

1. Aluminum: The lesser of minimum yield strength divided by 1.65 or minimum ultimate tensile strength divided by 1.95.
2. Copper Alloys: 60 percent of minimum yield strength.
3. Stainless Steel: 60 percent of minimum yield strength.
4. Steel: 72 percent of minimum yield strength.

F. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

G. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

2.03 CANOPY FABRIC

A. Product: Subject to compliance with requirements, provide fabric as called out and specified by the Architect in the bid drawings.

B. Fire-Test-Response Characteristics: Provide canopy fabric with the fire-test-response characteristics indicated, as determined by testing identical products according to test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:

1. Flame-Resistance Ratings: Passes NFPA 701.

C. Fabric manufacturer: The following is a list of approved fabric manufacturers for tensioned fabric structures.

1. Saint Gobain (Sheerfill product line)
2. Ferrari Textiles (Precontraint product line)
3. SEFAR (Tenara product line)
4. Interglass (Atex product line)
5. Seaman Corporation (Shelter-Rite product line)
6. Verseidag (Duraskin product line)
7. Naizil
8. Hiraoka
9. Mehler (Polymar product line)

D. Fabric properties:

1. Fabric thickness and tensile strength: Must meet engineering requirements with a safety factor of five.
2. Color: White

E. Fabric Substitutions

1. High Density Polyethylene (HDPE) woven mesh fabric may be substituted for non-waterproof applications only. HDPE fabric substitutions are only allowed when the architectural drawings specifically call out fabric as “Shade Fabric” or “HDPE Fabric” or “Non-waterproof Fabric” or “Fabric Mesh”.
2. Acceptable manufacturers of HDPE fabrics are Polyfab and Coolaroo.
3. Color: To be selected from the manufacturer’s range of available colors.
4. HDPE fabric membranes shall be designed to avoid contact with any PVC material.

2.04 CANOPY FRAME, CABLES, FITTINGS ND ACCESSORIES

- A. General: Provide accessories as standard with tensioned fabric canopy system fabricator and as specified. Fabricate and finish accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes. Comply with indicated profiles and with dimensional and structural requirements.
- B. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- C. Frame material shall be shall be constructed of cold rolled carbon steel unless otherwise specified by the architect in the bid drawings.

D. Steel and Iron:

1. Tubing: ASTM A 500 (cold formed) or ASTM A 513.
2. Bars: Hot-rolled, carbon steel complying with ASTM A 29/A 29M, Grade 1010.
3. Plates, Shapes, and Bars: ASTM A 36 or ASTM A 572 per engineering requirements.

E. Stainless Steel (when applicable);

1. Tubing: ASTM A 554, Grade MT 316L.
2. Pipe: ASTM A 312/A 312M, Grade TP 316L.
3. Castings: ASTM A 743/A 743M, Grade CF 8M or CF 3M.
4. Sheet, Strip, Plate, and Flat Bar: ASTM A 666, Type 316L.
5. Bars and Shapes: ASTM A 276, Type 316L.

F. Aluminum (when applicable):

1. Provide alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with strength and durability properties for each aluminum form required not less than that of alloy and temper designated below.
2. Extruded Bars and Shapes: ASTM B 221, Alloy 6063-T5/T52.

G. Cables and Fittings shall be constructed of galvanized steel unless otherwise specified by the architect in the bid drawings:

1. All cables in contact with PTFE fabric shall be PVC coated.
2. Any cable in contact with HDPE fabric shall never have PVC coating.
3. Manufacturers: Subject to compliance with requirements, provide products by one of the following manufacturers:

- a. John A. Batchelor Co Inc.
- b. Jack Rueben and Sons.
- c. McMaster Carr
- d. Frontier Technologies.
- e. The Crosby Group.
- f. Ronstan International Inc.

4. Galvanized Cables:

- a. Cable: 7-by-19 galvanized steel structural wire rope made from wire complying with ASTM A 603.
- b. Cable Fittings: Connectors of types indicated or required, fabricated from hot dip galvanized steel, and with capability to sustain, without failure, a load equal to minimum breaking strength of cable with which they are used.

5. Stainless Steel Cables:

- a. Cable: 7-by-19 wire rope made from wire complying with ASTM A 492, Type 316.
- b. Cable Fittings: Connectors of types indicated or required, fabricated from stainless steel, and with capability to sustain, without failure, a load equal to minimum breaking strength of cable with which they are used.

H. Metal Battens for Securing Canopy Fabric to Structural Steel Frame: Extruded aluminum.

I. Frame Finish shall be polyester powder painted unless otherwise specified by the architect in the bid drawings.

1. Powder Coat Finish:

- a. Commercial blast clean surface in accordance to SSPC-SP 10.
- b. Apply polyester powder coat paint to a minimum of 3 mils thick.
- c. Color: As selected from manufacturer's available stock colors.

2. Paint Finish for marine or other corrosive environments:

- a. Commercial blast clean surface in accordance to SSPC-SP 10.

- b. Primer Material properties – (1) coat of PPG/Ameron's Dimecoat 9 at 2.5-4.0 mils MDFT.
 - c. Paint Material properties – (2) coats of PPG/Ameron's PSX 700 at 3.0-7.0 mil MDFT per coat.
 - d. Minimum thickness – 8.5-18 mils TDFT.
 - e. Color: As selected from manufacturer's available stock colors.
3. Galvanizing (only if architect indicates requirement on bid drawings):
- a. Comply with either ASTM A 123/A 123M or ASTM A 153/A 153M for hot-dip galvanizing, as applicable.
 - b. Fill vent and drain holes that are exposed in the finished Work, unless indicated to remain as weep holes, by plugging with zinc solder and filing off smooth.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine structural steel framing and other substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Prepare written report, endorsed by Installer, listing conditions detrimental to performance.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.
- B. Prepare test and inspection reports.

3.03 ERECTION

- A. Proceed with installation of tensioned fabric structure only when existing and forecasted weather conditions will permit work to be performed in accordance with manufacturer's recommendations.
- B. Erect frame and fabric in accordance with the procedures of the approved manufacturer.
- C. Adequate pre-stress shall be applied to eliminate fabric wrinkles and excess cable sag.

3.04 ADJUSTING

- A. Occupancy Adjustments: When requested within 12 months from date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to one visit to Project during other-than-normal occupancy hours for this purpose.

3.05 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust cable and fabric tension and to clean and maintain canopy fabric.

END OF SECTION 33123